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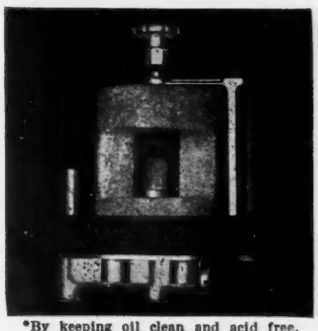

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MAY, 1933 COMMERCIAL CAR JOURNAL VOL. XLV. NO. 3

MOTOR TRANSPORTATION AND THE NEW DEAL

BY

J. W. Newhall

PRESIDENT, HIGHWAY TRAILER CO.

THE PRESIDENT'S PAGE

IT is interesting to note that each successive and progressive medium of transportation in America has completed the cycle of meager beginning, full realization, and finally its partial or total disuse in favor of newer means of transportation. Thus we come to a conclusion, briefly, that in the next decade, which in my firm belief will initiate and develop another prosperous period in America, there will be developments of newer transportation media and refinement of existing transportation media. All media of transportation now existing will be modified and certainly a greater emphasis will be given to motor truck transportation.

Just as the railroads and canals and the great natural waterways of the United States contributed to the prosperity of our previous decades, it is my firm conviction that the services rendered by motor car, and motor truck and trailers will be a contributing factor for the creation of this new prosperity.

My reasons for this conclusion are too numerous to mention, but outstanding in my mind is the fact that America has entered into a highly complex economic stage, predicated more on the delicate mechanism of business exchange, industrialism and foreign trade than on the development of pioneer resources. Such an economic stage demands a more refined and flexible form of transportation. The newer methods of business organizations demand fast turnover of inventories and a general speeding up of all types of commercial transactions. This demands a more intensified and dense system of distribution and since we have developed an extremely long way as regards production, the coming decade will shift its emphasis to a full development of methods of distribution. Motor trucks and trailers, passenger cars and buses today contribute this service and no existing transportation media in and of itself can stand the exigencies that the present stage of American economic life demands. Thus we hail the motor truck industry, the motor car industry and the motor bus as a development whose production facilities not only will contribute to this coming decade of prosperity, but whose ramifications of ultimate operation and use in rendering the delivery of goods and services will duly play their major part. It behooves us of the automobile industry to correlate our engineering research, our merchandising methods, and our personnel organizations so that we may be in a position of readiness to offer to the country this flexible, intensive, direct means of transportation which is still in its infancy. We must combat the tremendous inertia to change and adoption of new methods, which exists more in America today than ever before, so that economic progress be not obstructed.

With these thoughts in mind we turn to the New Deal promised months ago in the Presidential election and which has been rapidly taking on physical shape. Specifically our thoughts are on the phase of the New Deal in regard to the attitude to be adopted toward motor transportation, the motor transportation which I outlined above and which I predict will be a major contribution to the next decade of American prosperity. The New Deal thus far appears to assume leadership publicly, which previously had been supplied from private sources, and undoubtedly in the future will play as important a part in motor transportation as it has played in the past in other forms of transportation. What restrictions or regulations or fostering, if any, is embracable in this New Deal?

It appears that the New Deal will have to reconstruct the present existing media of transportation and correlate them with this new form of flexible motor truck-trailer transportation. Since the 48 different states have not standardized their policies in regard to motor transportation, the New Deal must formulate its own program. I do not look for a repetition of growth of governmental regulations as has been historically the case of the railroads. Rather the New Deal recognizes the immediate problem and demand for immediate results.

(TURN TO PAGE 38, PLEASE)

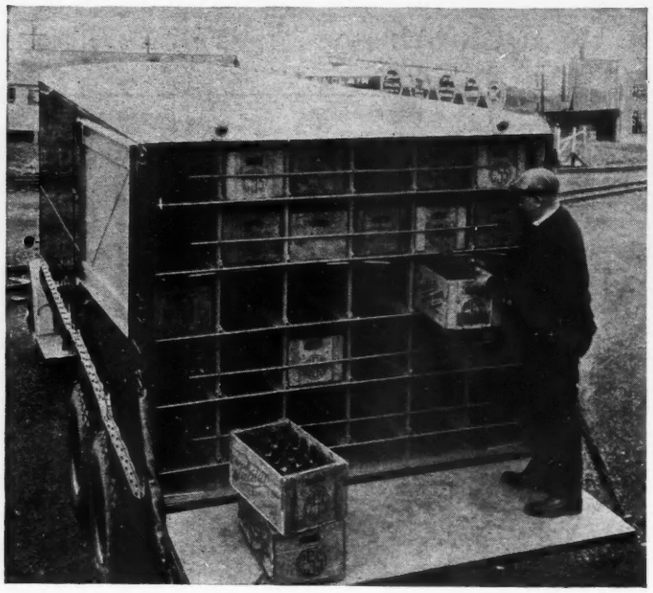


FIG. 1

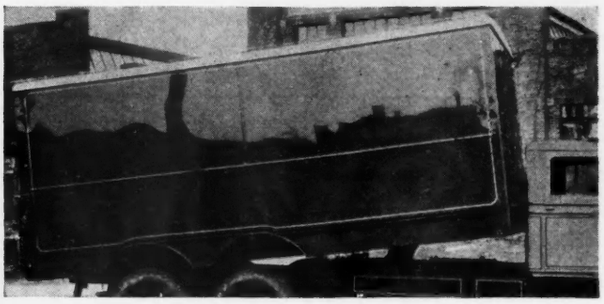


FIG. 2

BODY SLEUTHS THE BAFFLING

Bodies Pictured Are Fully Described in This Article

●

THERE is no doubt about it. The truck industry is exerting every ounce of inventive effort to develop vocationalized bodies that will meet the needs of the brewing industry. The first fruits of this effort—pictured and described here—are ample assurance to brewers and their distributors and retailers that the truck industry will do everything in its power to cut down their transportation costs.

When the beer body article which appeared in this publication last month was prepared most body builders were not yet ready to submit new designs. With the exception of a few designs, most of the bodies pictured were constructed along conventional lines. Since then body builders have had an opportunity to look around and to make inquiries, so that now the specialized designs are being announced.

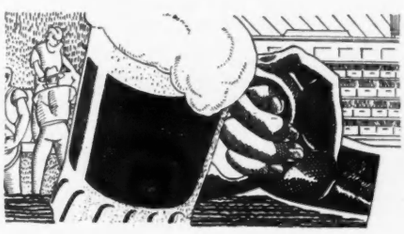
These designs, worked up especially for beer haulage, are meeting the primary requirements of this vocation—quick and easy handling of cases and kegs, and protection of the beer from sun and rain. Protection from the sun is necessary because changes in temperature affect many brews, and protection from the rain is essential because rain washes off the labels from bottles, and labels are the only means of identification.

Quick and easy handling is being accomplished in many ways. For keg hauling it is realized that low loading height speeds up handling and reduces driver fatigue. One body pictured here has a floor 29 in. from the ground so that kegs can be unloaded directly to a rope mat. Unquestionably the drop-frame type of chassis will be used extensively for keg hauling.

Case handling is receiving a degree of attention from the truck industry that is resulting in distinctly original types of equipment. Thus we have the V-shaped platform type, rack type, slotted type and the track-and-roller type. Case handling does not consist solely of the simple method of providing space for the piling up of cases of bottled beer. The ideal body design, it appears, must provide space for empty cases and provide an arrangement whereby a "mixed" load of case goods can be unloaded without any wasteful rehandling. The "mixed" load will be a more prominent factor in the future than it has been so far. Instead of supplying just plain beer you may find some brewers with such a diversity of brews as light and dark beer, lager, ale and porter. Another brewer may have a variety of such recognized brews as Wurzburger, Pilsener and Munich. To get at the Wurzburger there must be no handling of the Pilsener and Munich if a route is to be covered in the quickest possible time.

Bulk hauling is a problem by itself. It is not just a matter of taking a tank, putting it on a truck chassis, filling it up with beer and hauling it to a given point where the beer is hosed out like oil or gasoline. The problem presented is, as a matter of fact, an intricate one. Agitation of the beer must be kept at a minimum to prevent foaming; the beer must be under constant pressure while entering or leaving the tank and while in transit, and it must be protected from temperature changes. Tank builders are aware of all these problems and are designing equipment to solve them. They are doing even more than that. They see tank deliveries as a substitute for keg deliveries, whereby beer for draught-sale purposes will be delivered direct from the truck tank to a storage tank on the customer's premises.

How all these requirements of case, keg and bulk hauling are being met by the truck industry can be seen from a study of the equipment illustrated here



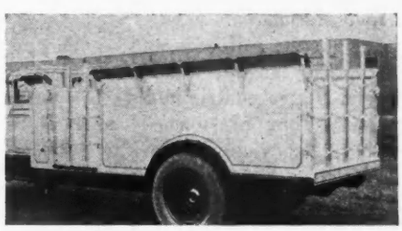


FIG. 5

FIG. 6

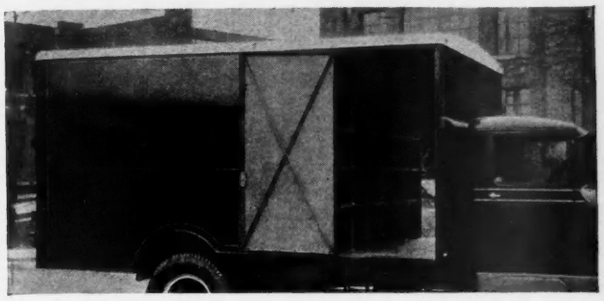


FIG. 3

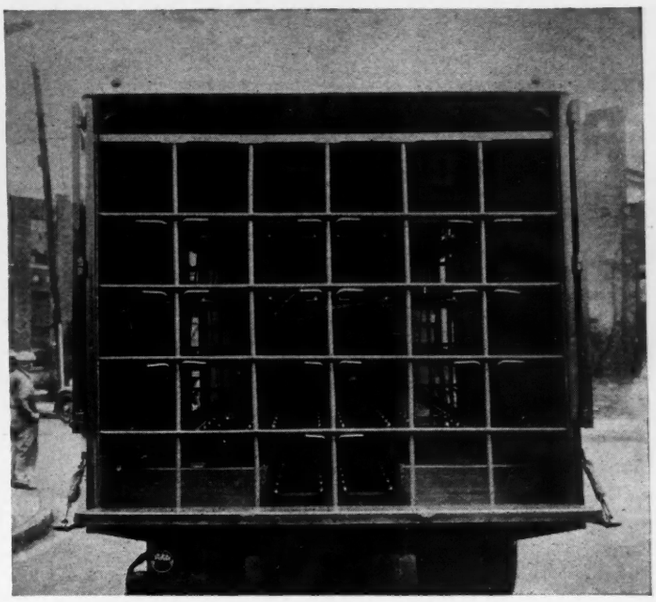


FIG. 4

FIND KEYS TO CASE OF BEER

By George T. Hook

FIG. 7

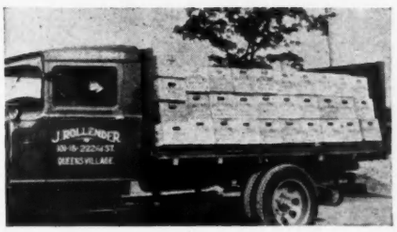


FIG. 8

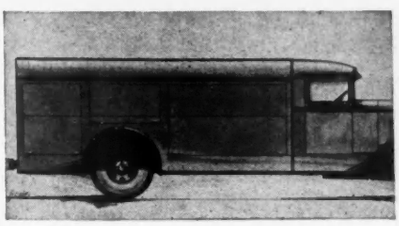


FIG. 9

and the brief descriptions given below:

Figs. 1 and 2 illustrate a wholesale case delivery body developed by FitzGibbon & Crisp with the gravity-flow system featured by this company. This system eliminates all manual sliding, moving or carrying of cases inside of the body. No cases are moved except those being loaded or unloaded. Moreover, direct connection can be made with loading platform conveyor at the brewery. Tiers of steel tracks, fitted with rollers that run on anti-friction bearings, carry and hold the cases in rows, one case wide. Loading of full or empty cases is from the rear. The tracks are inclined downward toward the front so that the cases roll forward one after the other until the truck is loaded, and then locked in position. In unloading, a hydraulic hoist raises the front of the body as in Fig. 2, reversing the slope of the tracks, thus causing the cases to roll to the rear.

This body in 300-case capacity is for a six-wheel chassis, and in 396 and 508-case capacities for a semi-trailer.

Figs. 3 and 4 show the same company's wholesale-retail gravity flow body with forward compartment. This has no hoist. The tracks are inclined upward toward the front of the body. In loading, the cases are placed on rear track ends and rolled forward one after the other until each track is loaded. In unloading, the natural pitch of the tracks rolls cases to the rear from which they are removed. The forward compartment is for empty cases, and should it become full the empties can be placed in empty tracks. The compartment can also be used for extra full cases and for barrels. When on the road, the cases are locked in position. This body comes in two models of 172- and 202-case capacities.

A third gravity-flow type, not illustrated, is a rear-loading and side unloading job for retail delivery. Tracks are inclined downward toward the front so that cases loaded at rear roll forward and are locked in position when body is full. Empties are loaded at rear in spaces left by full cases moving forward. In unloading, cases are reached through hinged or sliding type doors on both sides of body. The side rows are one case shorter, leaving space to unload center rows and making six different "flavor" selections available. This type comes in three models of 72, 90 and 118-case capacities.

All gravity-flow type bodies are fully enclosed. Body and track framing are of steel, bridge-type construction.

Fig. 5 illustrates the FitzGibbon & Crisp low-bed beer barrel and keg body. Capacity is 42 whole barrels, or 82 half-barrels, or 265 cases. At the side the floor is 29 in. off the ground.

Fig. 6 is an Edwards Iron Works all-steel case body. Facility in loading and delivery is gained by the low bed of the body which is 33 in. above the ground on the average 1½-ton chassis. This brings the bottom of the top tier of cases 55½ in. high. Steel cross channels on the floor prevent load shifting. Chain guards are equipped with heavy snaps. The body illustrated has a capacity of 80 cases. It can be had up to a 150-case capacity. The 12-in. sign with scroll supports is standard.

Fig. 7 is a Heil bottler's body showing the doors open and the case compartments. It has a capacity of 24 12-oz.-bottle cases. Each compartment is 3 cases deep. Doors are provided only on the curb side. The three compartments around the fender can be used for a refrigerant in summer or a heater in winter. The body is insulated on all sides, top and bottom. It can be made in several sizes and the compartments can be made to suit the size of cartons or cases.

Fig. 8 shows a Proctor & Keefe plat-

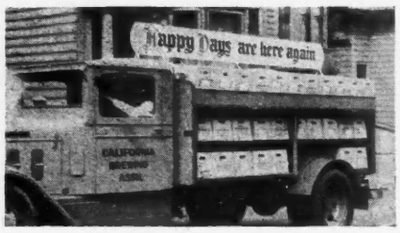


FIG. 10

FIG. 11

FIG. 12

form type with stationary ends and with 6-in. raised side rails to tilt the outer row of kegs or cases. A center tarpaulin bar—not shown in the illustration—connects the stationary ends with an 8-in. longitudinal signboard above. A tarpaulin is standard. The body is available in a number of sizes. On this body kegs are usually piled crosswise of body and tipped toward center of body platform. Only two tiers of full kegs are ordinarily carried on each side. "Eighths," commonly known as "Dutchmen," are stowed between keg heads down the center.

Fig. 9 is referred to by General Motors Truck as its Type "J" body. It is a deluxe closed van with sliding overhead doors on each side. Its capacity is 125 cases. It can be supplied with cab separate.

Fig. 10 is a body by Wood that has two loading decks and a roof deck for carrying empty cases. Both sides are enclosed by sliding metal or tempered Masonite doors. The decks for full cases slope downward toward the center of the body, it will be seen, while the top deck for empties slopes upward. The job illustrated has a capacity of 87 cases. This body is available in two types: the three-deck, three-cases-wide type comes in 69, 78, 87 and 96-case capacities; the three-deck, four-cases-wide type comes in 90, 102, 114 and 126-case capacities. The bodies can be furnished for semi-trailers and trailers as well as for trucks. The signboard is standard.

Fig. 11 shows a compartment type body with a roof deck. This illustration was furnished by the Sterling truck company. The enclosed part of the body holds 98 cases and it is possible to load another 100-150 cases on top, in which case a tarpaulin is used. If your eyesight is sharp you will notice that the doors on the side do not have visible handles. An enlarged photograph showed merely holes. So it is assumed that a master handle in the driver's possession is used to open the doors to the different compartments.

Fig. 12 is the Specialty Engineering Co.'s wholesale delivery type of body. Cases are carried on rollered racks to provide quick loading and unloading. All cases are locked in by bars across the back which interlock so that the entire load can be padlocked with one

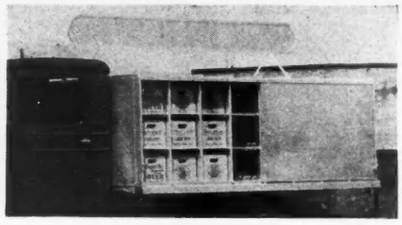


FIG. 13

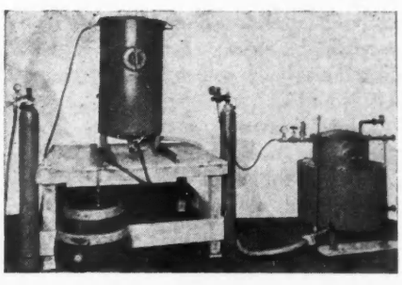
lock. This particular body has a capacity of 224 cases. It is subject to many variations. Rear doors can be provided or a tarpaulin covering may be used. The body can also be supplied without sides, in which case a tarpaulin can be used.

Fig. 13 is Specialty's retail delivery body with two sliding doors on each side and a roof deck. The job pictured has a capacity of 96 cases inside and space for an additional 12 cases on the top. Additional capacities can be provided by making the body one or two cases higher as well as longer.

Fig. 14 shows the experimental equipment with which the Davis Welding & Mfg. Co. conducted tests to prove that beer can successfully be hauled in tanks and transferred to storage tanks in the customer's premises. On the platform is the experimental vertical truck tank. It is equipped with rockers to facilitate agitation and observation windows to reveal what is going on inside when the beer is agitated. The tank has a float with a removable guide running vertically in the center and passing through the center of the float. The purpose of the float is to prevent agitation of the beer, especially with the tank partially full, and therefore eliminate foaming. The squatty tank on the right is the experimental customer's storage tank into which beer was introduced successfully.

The Davis company has applied for

FIG. 14



patents covering salient features of this method of distribution, especially the float valve, the upright tank unit and the emptying method. This system of distribution will be described in greater detail in the June issue of *Commercial Car Journal*.

The products of other companies are available. Federal Motor Truck Co. submitted a blueprint of a closed body for case delivery. It has two sliding doors on each side, skid strips so arranged that there are two under each case, and a capacity of 90 cases on Federal's 1½-ton 166-in. wheelbase chassis. Dimensions are subject to variation.

Kentucky Mfg. Corp. sent in literature describing an all-steel brewers' delivery body. It is the platform type with stationary ends. The floor is slightly flared on the sides so that cases tip inward. The floor is also roll-ribbed. The standard body comes in 99, 110 and 121-case capacities. The heavy-duty combination body for cases, kegs and barrels is of the same pattern and dimensions except it is equipped with skid rail and built of heavier gauge steel. It comes in the same case capacities as the standard body.

Literature of Hercules Products, Inc., shows several types of bodies. There is an open all-steel type with stationary ends and a triangular-shaped center partition. This partition and the floor, which slopes to the center, are corrugated. It is suitable for hauling mixed loads, cases on one side and kegs on the other. It can be furnished with or without wheelhousing. The approximate load is 108 cases.

This same company has conventional rack-type bottlers' body that is completely enclosed and comes in 68, 84, 90 and 114-case capacities. For kegs, barrels or bulk loads there is a Chicago stake body with heavy hardwood floor and steel sides.

The Weldmech Steel Products Co. sent in pencil drawings of two new designs. One is a platform body with rounded roof, signboard on roof and corrugated floor sloping to the center. The other is a completely enclosed unit with a roof deck. Both roof and floor slope to the center. It has three sets of double doors on each side. It is equipped with a signboard. Both bodies are available in different sizes.

THE HIGHWAYS AND THE RAPACIOUS RAILROADS

If railroads get the legislation they are sponsoring, everybody else will be regulated out of transportation

By J. Howard Pew
PRESIDENT, THE SUN OIL CO.

●

At the invitation of the Philadelphia Chapter of the Pennsylvania Motor Truck Association Mr. Pew addressed the hallful of truckmen and representative businessmen shown above. He delivered a powerful, logical argument against railroads and anti-truck legislation. His chief points are incorporated in this article

OUR state faces the question of what uses its highways are to serve, and who is to pay for them. The railroads demand taxes and "regulation" to drive commercial traffic off the highways, in order that they may force that traffic back to the rails.

Now, I am in the oil business, and if the legislature would drive everybody else out of the oil business and leave it all to my company, it would make things a lot easier for me. And if the legislature does that much for the railroads, I see no reason why it should not for me.

Next to having all the oil business legislated over to our company, I should like to have minimum prices fixed for our competitors. Just let us name our own prices for gasoline, and keep those of our competitors a few cents higher, and we'll try to wiggle through the depression somehow. That's another thing the railroads are demanding and if they get it I don't see why I should not.

The railroads' propaganda this winter has given me a lot of good ideas for helping business. It is a pet theory of the railroads that more taxes—that is, more taxes paid by the other fellow—would be the ideal business restorer.

A man who manufactures shoes told me the other day that he was convinced that trucks ought to pay more than they do; he thought gasoline taxes and license taxes ought to be raised, because that would get more money to build more roads; and the folks who used them would pay for them. I said it was a good scheme, and called attention to the fact that a bill had been introduced to require three-foot sidewalks alongside all state highways.

"Now," I said, "there is a bill you shoe manufacturers ought to support. Build sidewalks along all highways and people will walk more, thus wearing out more shoes. Then put a 100 per tax on the manufacturer's cost of every pair of shoes, and provide that this shoe tax be used to pay for the sidewalks. That's how gasoline taxes pay for the roads. A national shoe tax would produce about $750,000,000 annually; the manufacturers would pass it on to the consumer, so it wouldn't hurt the industry. In fact it would be a good thing, because with all those sidewalks people would walk so much, and wear out so many shoes, that the shoe industry would be securely back on its feet in no time at all."

My shoe manufacturing friend didn't seem enthusiastic about my plan. In fact, I find that nobody seems enthusiastic about increasing his own taxes, so they have all concentrated on boosting automotive and oil taxes.

The less the public knows about the taxes railroads pay, or rather don't pay, the better. But mass production of literature is pretty certain to involve an occasional slip; and so this question of taxes got dragged out, and somebody unguardedly told the truth; which is, that railroads in Pennsylvania pay only one-eighth as much taxes per mile as they do in New Jersey, one-third as much as in New York, and one-half as much as in Ohio and West Virginia. It was shown that railroads in Pennsylvania paid only $12,000,659 taxes. Whereas on the New Jersey basis the figure would have been $102,000,000! It would never do to let such damaging facts as that get a lodgment in the public mind; and so the vice-president in charge of finance of one of the big railroads undertook to explain. In a speech on Feb. 14 last, at Harrisburg, he said:

"The railroads operating in Pennsylvania paid, in 1930, Federal, state and local taxes amounting to $113,264,000."

I ask you to note carefully the phraseology. "The railroads operating in Pennsylvania" paid $113,264,000. Of course, hearers assumed, and were intended to assume, that the railroads

paid $113,000,000 taxes in Pennsylvania. Yet that $113,000,000 total was made by adding together all the taxes of all the railroad systems whose lines touched Pennsylvania! Pretty much all the eastern railroads "operate" to some extent in Pennsylvania and if you add together all the taxes of all these systems, that $113,000,000 figure is pretty accurate. But the impression which was deliberately left with hearers was that the railroads paid $113.000,000 taxes to the state of Pennsylvania.

● Rail Rates 68% Higher

This same official, in this same speech, ingratiatingly assures us that truck rates should be subject to public regulation, because, he said, "stability of rates is much more important to the shipping public than the level of those rates." That is, it doesn't make much difference how high the rates are, if they just stay there. I can see how our railroad friends could feel that way. A member of the Interstate Commerce Commission the other day stated that railroad rates are now 68 per cent higher than before the war. While everything else has been coming down, railroad rates have been going up. If stability is the quality most to be desired there is no good reason why these rates should ever come down; it is much more important for them to be stable. But of course they can't be kept where they are now if truck competition is to muss up their stability; so we must suppress the truck.

I have heard some selfish and sordid shippers suggest that if the stabilizer attachment had been applied before those 68 per cent increases were added to rates, the business community might have reconciled itself more easily to the theory of stability as the prime virtue of rate structures.

You may have noticed how the railroad spokesmen love to quote court decisions—when the decisions are on their side. Lately they have been vociferously approving the Supreme Court decision in the Texas Highway case. Texas passed a law regulating highway carriers, and the U. S. Supreme Court held it constitutional. The court found that the highways are public property, and that the legislature may condition their use for commercial purposes as it sees fit. That was what Texas had done, and the court found it was constitutional.

Of course, nobody was surprised at that decision. We all knew the highways were public property, and we all knew the legislature has power to regulate their use. The real question as regards the Texas law wasn't one of constitutionality, but of common sense. The constitution doesn't guarantee common sense to legislatures, and even the Supreme Court can't always provide them with it. The Texas legislature passed an unwise law, which is hurting the state; but it wasn't unconstitutional. The railroads have been demanding that the Pennsylvania legislature pass a whole series of unwise laws, more or less modeled after this Texas statute. If passed, they would injure business, industry, agriculture, even the railroads themselves; but quite likely they would be constitutional. The other day a Georgia legislator introduced a bill requiring passenger trains to carry life boats and life preservers whenever they crossed streams more than 25 feet wide. That would likely enough be constitutional; but it would also be extremely silly. Yet, it wouldn't be much more silly than authorizing a public service commission to fix minimum rates for highway carriers, in order to get their charges up to where everybody would have to patronize the railroads; and that is one of the things the railroads are demanding.

● No Basis for Rate Fixing

In many states this season the railroads have pressed bills to authorize public authority to fix minimum rates for truck service. Of course that means that the minimum rate would be fixed with reference to the railroad rates; that is, the lowest truck rate would presumably be set high enough to give the railroads a good chance at the business. Unless they hope for at least that much, the railroads would have no reason to ask such a law; and they are asking it very generally. Now, it is plainly impossible to fix the price of one service or commodity with reference to another. Can you imagine a law to fix prices of bread with a view to insuring that it shouldn't supplant beef in the market? Or is it conceivable that a commission should fix the price of potatoes with a view to insuring a market for rice? All these analogies strike us as foolish; yet they show just what is in the minds of people who want minimum truck rates fixed by commissions. Nobody except the railroads ever asked to have minimum rates fixed for truck service—and the railroads couldn't possibly have but one purpose. That is, to insure them some business, at higher rates, that they couldn't get at lower rates.

The point is that the truck and the railroad don't render the same service. You can't fix the rate for one in terms of the other. Can you imagine a law saying that a bushel of wheat should always sell for the same as a bushel-and-a-half of potatoes? It would be just as reasonable; wheat and potatoes are both foods: railroads and trucks are both transportation agencies. But when a man's appetite demands a potato it isn't going to be satisfied with a slice of bread; and when his business requires the special facilities the truck affords he isn't going to use the railroad, if he can help it.

Let none of us forget that if the railroads get the "regulation" they are demanding the end will be that everybody else will be regulated out of every phase of the transportation business. What they want is monopoly; they have always wanted it, but they have never before made such a concerted and determined fight for it as they are making right now. Let no trucker who happens to hold a certificate of public convenience and necessity flatter himself that his position is secure, his franchise perpetual. He has rights over certain routes or in certain areas. But what will these be worth if a few great trucking concerns, subsidiary to or affiliated with the railroads, get certificates covering the whole state? That sort of certificate is right now being demanded. If granted, it means the beginning of the end of the trucker who would compete with the railroad-controlled concerns. The financial power and the business influence of the railroads will then be joined together to force all traffic to move by rail and by the rail-controlled truck lines.

Let the truckers—whether they are certificated or not—understand this. And, more important yet, let all business understand it. For it means to business—to all business—that once this combination is in control the last chance of getting reductions in railroad rates is at an end. Business will have to pay what the combination demands; if it can't pay, it can quit. And in present circumstances of business and trade a lot of it would have to quit.

● "But We Will Win"

The whole railroad interest of the country is in this crusade to seize the highways. In all the legislatures this winter similar measures have been introduced, everywhere urged by the railroad lobby.

So we must recognize that this is going to be a long and determined struggle. The railroads will not retire from the field after a single defeat. It required decades to destroy the canals, to suppress the steamboats. The prize is greater today than ever before. Only by making the business community realize the dangers; only by educating the whole people to understand the real issue; only by arousing the public interest and the public conscience; only thus, and by fully realizing that eternal vigilance has always been and will continue to be the price of highway freedom, shall we win our fight.

But we will win.

Fleet Employers and Employees Are At the Public's Mercy

A fleet superintendent analyzes the part each man must play to insure the operation's success

By Paul A. Munn

Superintendent of Maintenance (Formerly of Hene Bros., Chicago)

I HAVE noticed that lots of times there is a bad practice among the different departments in a fleet operation. Each seems to magnify the importance of itself and belittle the others. Sort of looking at each other through the wrong end of the telescope. A lot better to turn it around; more harmony and greater efficiency. The other fellows have trained for their jobs just as hard and long as you and the experience, knowledge and skill which they possess are just as necessary and valuable to the business as yours.

The business is organized to render a service to the people in exchange for money. Everyone in it is employed by the public. The big boss is just as much an employee as the porter. He may own the plant but the public will soon fire him if he does not conduct his business efficiently. Comrades in arms, as it were.

Some men must be driven, others coaxed to get them to do their best, and some must be let alone.

The lad who has the executive job must start by driving himself. Then he must study his men and handle them accordingly. A little diplomacy is more effective than a load of dignified authority. A man will do more for his friend, the boss, than he will do for that "damn Simon Legree." The slavery days are over.

Some men never learn that their jobs depend on the success of the business. If their inefficient and wasteful methods destroy the profits, or ruin the business, their pay must be cut, or their jobs eliminated.

Every dollar a man wastes for the firm is one dollar he can't get any share in himself. A man who knows this is a better man.

A chauffeur may be ace high in the shipping department and zero in the repair shop. That's bad. If he is a good delivery man, that is fine, but if he is a truck buster, no good. The extra money he brings in the office is often spent many times over in the shop, repairing the damage to his truck. He is expensive. The shipping and shop departments don't always cooperate in these cases.

We had a driver who made fast time. He would haul five loads to another man's four, on the same work. He got a big hand from the office. But in the shop we painted his truck number on the trouble report blackboard; it saved the night man, who took the reports as the drivers came in, the bother of writing it each night. We finally got rid of him after he wrecked three motors beyond repair in six months. Records showed it cost four times as much to keep a truck under him as any other driver. But his trip sheets showed he was a money maker. His disease was spreading through the rest of the drivers. They felt they had to meet the competition. Proving again that one bad apple will spoil a barrel of good ones.

The cost of not having good and adequate equipment and special tools in the shop is very hard to estimate. A man's time costs just as much per hour if he is trying to do by hand some job which could only be done right with a special tool or machine, only the hand work takes many times as long and will probably require doing over. Sometimes failure of a job of this kind will cause destruction or damage on a single job which would cost more than the equipment.

This is one reason why shop men

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When Total To Drop,

The Economic Point—

"The definition of the economic point says that the total expenditures divided by the number of miles traveled should be a minimum. As the mileage covered increases from zero the cumulative total cost per mile decreases at first very rapidly. The truck should be abandoned at the point where it ceases to decline. No one who subscribes to the definition of economic point would maintain a truck should be kept after the cumulative total cost per mile starts to increase."

ONE of the problems confronting operators of large fleets of trucks is the determination of the proper time to dispose of old trucks. Unquestionably, the proper time is that when the most value has been had for the money. This definition of the proper time is simple enough. The difficulty comes in determining this economic point in practice. It is the purpose of this study to present a graphic method for determining the economic point decisively.

The definition of the economic point says that the total expenditures divided by the number of miles traveled should be a minimum. Total expenditures include the initial investment in the truck and the costs for maintenance, gasoline, oil and tires. At any particular time, the sum of these items divided by the total number of miles traveled gives a quantity which is called the cumulative total cost per mile. As the mileage covered by the truck increases from zero the value of the cumulative total cost per mile decreases at first very rapidly. A time does come, however, when it ceases to decline and either remains constant or turns up as the miles increase. The truck should be abandoned at the point where the cumulative total cost per mile ceases to decline. No one who subscribes to the definition of the economic point would maintain that a truck should be kept after the cumulative total cost per mile starts to increase. He might think, however, that the truck should be kept all the time the cumulative total cost per mile is constant. To clear up this point, consider the following example:

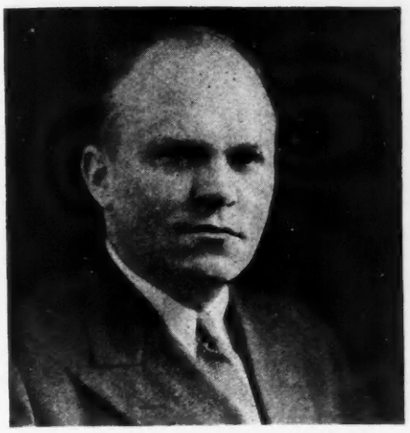
Suppose the cumulative total cost per mile for a truck ceases to decline when the truck has traveled 40,000 miles and is 10 cents a mile. Assume also that the cumulative total cost per mile remains constant until the truck has traveled 80,000 miles. The total cost for the first 40,000 miles is $4000 and the total cost for the second 40,000 miles is also $4000. If the old truck had been abandoned at 40,000 miles and a similar new one acquired the total mileage and total cost would have been the same.

From this it is clear that it is not necessary to wait for the cumulative total cost per mile to increase to abandon a truck. The truck should be abandoned when the cumulative total cost per mile ceases to decline. The procedure for determining this point can best be described by the experience of an actual truck.

Chart 1 shows the course of the component parts making up the cumulative total cost per mile. It is seen that the cumulative costs per mile for gasoline, oil and tires are practically constant. These, then, have no effect in bringing about the changes which occur in the cumulative total cost per mile. There are only two components which have any noticeable effect in bringing about the change. One of these is the initial investment component which decreases continuously in a smooth curve. The other is the maintenance component which increases as the mileage increases.

The cumulative cost per mile for maintenance was calculated at various times as shown by the black dots on the chart. The course of these dots is closely represented by a straight line passing through the origin. Of course maintenance repairs are not made continuously at every mile. They are often made in large amounts at various times over the life of the truck. Therefore, the curve of the cumulative cost per mile for maintenance calculated at every mile, would have an appearance similar to the broken line on Chart 2. These fluctuations in the cumulative maintenance cost per mile also appear in the cumulative total cost per mile calculated at every mile because all the other components of the total are smooth curves. What appears to be a

Cost Per Mile Ceases Replace the Truck



By W. T. Collins
Assistant Economist,
R. H. Macy & Co., Inc.,
New York City

minimum at one time in the cumulative total cost per mile, therefore, may be followed later by a still lower minimum. The effect of this is to obscure the true minimum, which is the economic point. Since one is continuously looking for a lower minimum, he passes by the true minimum and runs a truck much beyond the economic point.

Even though repairs are not made continuously at every mile during the life of a truck, each mile does, nevertheless, exert its influence in causing repairs. This influence is represented by the trend of the cumulative maintenance cost per mile rather than by the actual curve. The chart shows this trend to be a straight line passing through the origin. Charts 3 and 4 for trucks of two other makes also show that a straight line passing through the origin represents the trend of the cumulative maintenance cost per mile. It can be concluded then that a straight line passing through the origin represents the cumulative cost per mile of the need for maintenance. Now since the maintenance component is a straight line, it is increasing at a constant rate. The initial investment component, however, declines very rapidly at first but declines more and more slowly as the mileage increases. At some point it is declining at the same rate as that with which the maintenance component is increasing. At this point obviously the sum of these two components has ceased to decline. Since these are the only two factors tending to change the cumulative total cost per mile, this is also the point where the cumulative total cost per mile has ceased to decline and therefore is the economic point. This point is the intersection of the investment and maintenance components. This can be shown by drawing a tangent to the investment component at the point of intersection. It can be readily seen that the tangent has the same slope as the maintenance component, except that it is negative. Mathematical proof also is simple. The investment component has the general equation:

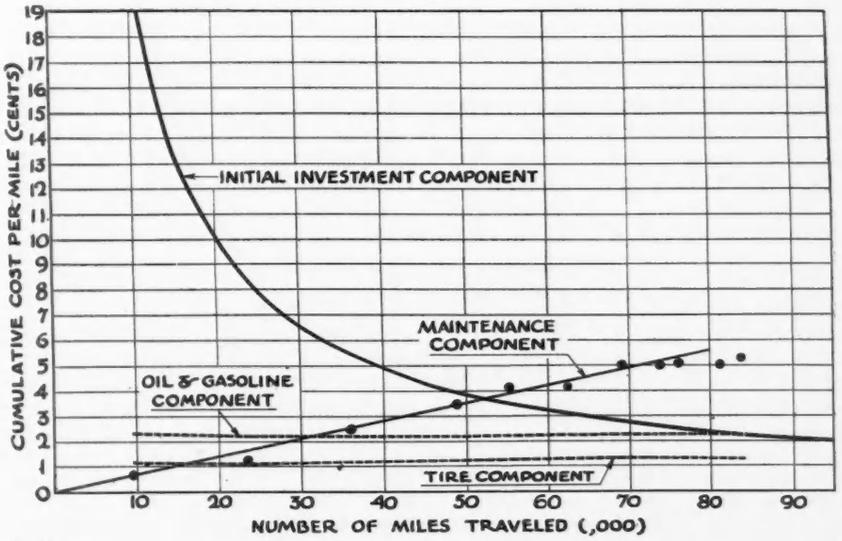
$$y = \frac{k}{x}$$

Let the point of intersection be $\left(a, \frac{k}{a}\right)$ which is a general point on the investment component.

The maintenance component through the point and the origin has the equation:

$$y = \frac{kx}{a^2}$$

Chart 1. *This shows the course of the component parts making up the cumulative total cost per mile.*



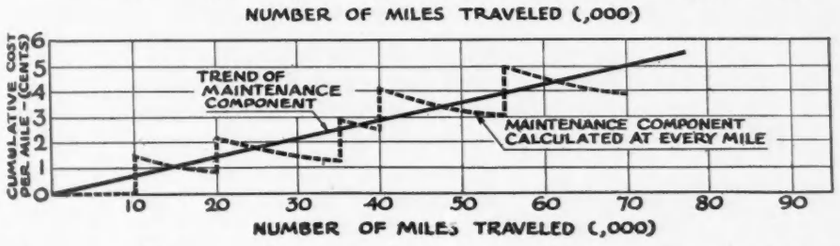

CUMULATIVE COST PER MILE - (CENTS)
TREND OF MAINTENANCE COMPONENT
MAINTENANCE COMPONENT CALCULATED AT EVERY MILE
NUMBER OF MILES TRAVELED (,000)

Chart 2. *The curve of the cumulative cost per mile for maintenance calculated at every mile would have an appearance similar to the broken line*

By the methods of the differential calculus, the rate of change of a curve at any point is the first derivative. For the two equations these are:

Investment component $\frac{dy}{dx} = \frac{k}{x^2}$

Maintenance component $\frac{dy}{dx} = \frac{k}{a^2}$

Substituting "a" for "x" in the first equation, it is seen that the rate of change of each at the point of intersection is the same $\left(\frac{k}{a^2}\right)$ except that one is positive and one is negative. Therefore the point of intersection of the investment and maintenance components is the economic point.

Rather than to confuse the presentation of the general solution for the economic point, no mention was made of the effect produced by the changing trade-in value of the truck. This factor has the effect of causing the economic point to be reached more quickly than indicated by the general solution. If the initial investment less the trade-in value at every point is divided by the number of miles traveled the result is the net investment component which would lie underneath the initial investment component of Chart 1. The net investment component would gradually approach the initial investment component and be separated from it at the economic point by a distance resulting from a trade-in value of perhaps fifty dollars. For a long distance on each side of the economic point the trade-in value is probably constant so that the net investment component also has the general equation $y = \frac{k}{x}$ over this range. Since the trade-in value is a small quantity, the economic point is not shifted appreciably to the left and for practical purposes the general solution for the economic point is all that is necessary.

Forecasts Life in Miles

"Besides serving the purpose of indicating the point at which to trade-in a truck, the graphic method (described in this article) also provides a means of forecasting the probable number of miles of a truck's economic life."

One other factor which was not mentioned in the general solution is the effect produced by interest charges on the capital invested. Recall the assumed situation of one truck running 80,000 miles at a total cost of $8,000 and two trucks running 40,000 miles each, at a total cost of $8,000. Even though the total amount of money spent in each case is the same, there is the question of difference in interest charges on the capital investment because the capital outlay for new equipment in the second case is twice that in the first case. Since the total amount of expense is the same in each case, the only difference comes from expending it at different times. For each case, the expenditures made during the first 40,000 miles are identical; the only difference comes in the second 40,000 miles.

In the case where a new truck is purchased, a capital outlay for the price of the new truck is made at the start of the second 40,000 miles. In the case where the old truck is run for the second 40,000 miles, an amount of money, equal to the price of the new truck, is spent for maintenance. If this expenditure for maintenance is made in infinitely small amounts during the 40,000 miles, the difference in interest charges on capital outlay between the two cases is exactly the interest on the cost of the second new truck outstanding on the average during the time in which the 40,000 miles are run. If the second 40,000 miles are run uniformly in three years and if the cost of the new truck is $1500, the interest charge are $135 or

$$\frac{1500}{2} \times .06 \times 3 .$$

But of course, maintenance is not spent in infinitely small amounts; repairs often amount to $300 or $400 at a time. These expenditures are in reality a series of investments so that the difference in interest charges is much less than the $135 previously indicated. The amount is insignificant compared to the total cost of $8,000. When it is further considered that the cumulative total cost per mile for the old truck actually starts to increase beyond the 40,000 mile mark rather than remaining constant as assumed in this case, it is evident that the general solution still holds.

Besides serving the purpose of indicating the point at which to trade-in a truck, the graphic method also provides a means of forecasting the probable number of miles of a truck's economic life. When a few points of the maintenance component have been plotted, a temporary trend line can be drawn to intersect the investment component, giving a fairly accurate forecast of the mileage at which the economic point will be reached. The temporary trend line can be made more accurate as more points of the maintenance component are available.

It is self-evident from the definition of the economic point, that the costs of operating various makes of trucks on the same job can be compared only at the economic point. Such a comparison can be made by taking for each truck the sum of all the components at the economic point. It should be noted that the graphic method provides the only sound comparison.

Chart 3.

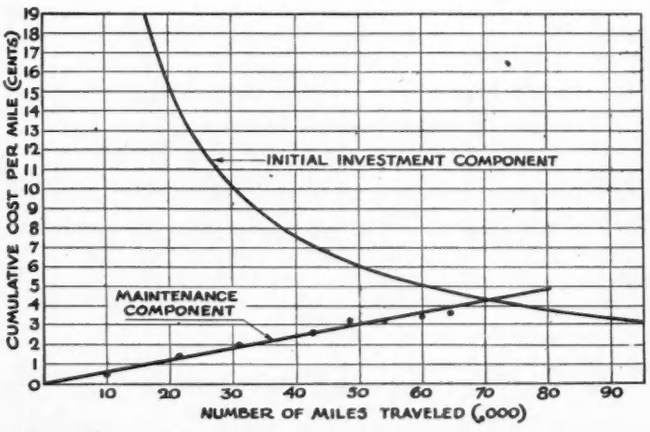
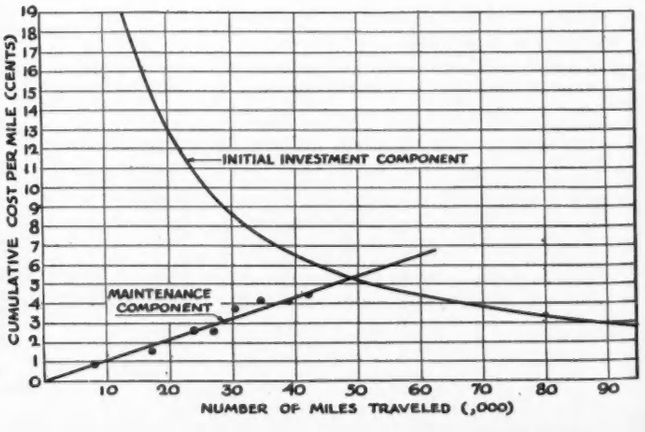
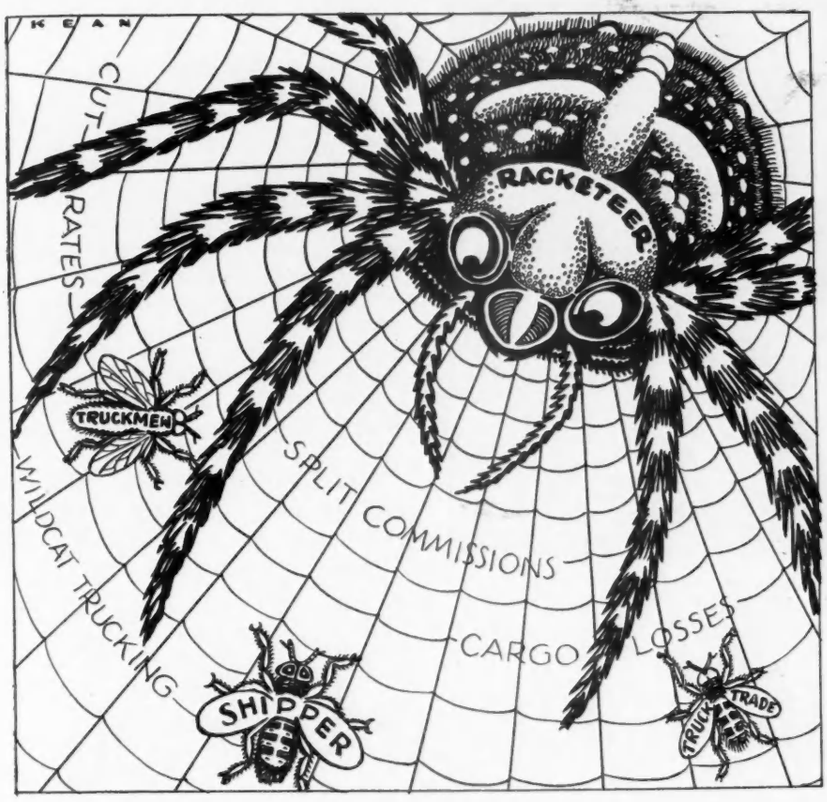


Chart 4.





The Freight Brokerage Racket—and Its Victims

By
A. E. HOLDEN

Whose expose of motor freight racketeering conditions on the West Coast is based on an investigation conducted in Los Angeles.

During his investigation he interviewed important shippers, legitimate motor transport operators and brokers, representatives of the truck trade, the Railroad Commission and the Board of Public Utilities of Los Angeles.

The practices of the racketeers and the effects of their unethical conduct are recounted.

This form of racketeering has made its appearance in other cities. Truck interests everywhere should line up and stamp it out before it stirs up resentment that may affect legitimate transport agencies.

Details of the unethical practice the industry must blot out in order to hold the respect of the public

OUT on the West Coast legitimate motor transport operators and state and local authorities are waging a bitter fight against the many unscrupulous motor freight brokers whose racketeering has caused disastrous rate-cutting and large losses to shippers, the automotive trade and innocent individuals aspiring to a place in the field of highway transportation.

The evils that beset the trucking business here began four years ago when $25 a ton was the established rate between Los Angeles and Phoenix, Ariz. —a 500-mile run. Then l. c. l. rates were $1.85 per hundred weight. Then the trucking industry flourished. Drivers received high wages for restricted hours. Shippers were satisfied, and profit attended the entire cycle, from truck manufacturer to dealer, to ultimate consumers.

When most obstacles natural to a pioneer industry had been conquered, and the future offered a just reward for capital, brains and honesty, dark clouds arose. The racketeer saw a chance for easy money. For the sake of clarity and authenticity, let us visit the Board of Public Utilities, Motor Vehicle Department of the city of Los Angeles, and learn the facts. Your correspondent will report them just as they were told to him by a board representative.

"First, I will speak of the mine-run variety of wildcat motor transport brokers as they operate in Los Angeles. It is not an illegitimate practice—just unethical. In its development, moral discrepancies creep in. In its more virulent form, dishonesty, swindling, thieving and other illegal practices prevail.

"The unethical motor freight broker, often referred to as a racketeer, rarely invests more than a nominal capital. *He practices on public credulity.* Huge cargoes of freight must be hauled. Shippers by nature want and seek lower and lower rates. So the demand exists. As the sucker crop is greater now than in Barnum's day, because of a larger population and widespread unemployment, it is easy to form a carrying agency."

"How *is* a brokerage business started?" was asked.

"First, they must have trucks, but there is no money. The organizer visits a truck salesman, and tells him he has a prospect. The salesman offers to split commissions, which is legitimate. Then they insert a classified advertisement under 'Business Opportunities':

> "'WANTED: Reliable man to operate truck; $1,200 required. You control investment. Long distance hauling contracts guaranteed; $250 a month or better, clear profit. See Salesmanager Morrison, 5050 Broadbrook Avenue.'

"That brings your man. Morrison has the background of an established legitimate business; which it is. That inspires confidence. The broker comes in, paints a rosy picture of profits, and

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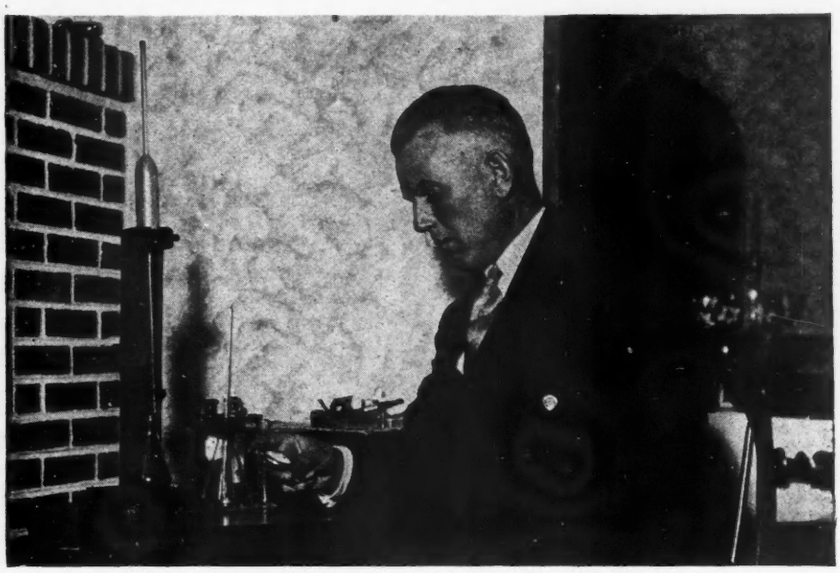

Silas I. Royal, author of the articles on crankcase lubrication which are appearing in this journal

VISCOSITY OF THE LUBRICATING oil in a crankcase mixture, which includes diluent and contamination, must be distinguished from the viscosity of the mixture. A heavy oil diluted by heavy ends of fuel does not give the same results as an undiluted light oil of the same viscosity as the mixture.

This article, which is the fourth of a series devoted to engine lubricants, is intended to clear up questions raised by Clinton Bretell, of R. H. Macy & Co., and others about contentions in the preceding articles.

The fifth article will appear in an early issue.

Power Loss and Wear Vary With Oil's Viscosity

By Silas I. Royal

OIL CHEMIST
AND LUBRICATION ENGINEER

THE rate of engine wear and the extent of power loss vary according to the viscosity of the oil in the crankcase. For this reason the viscosity of the oil when put in the crankcase as well as the changes which take place in the oil must be considered. By viscosity of an oil we mean, in this article, the viscosity taken at 100 deg. F. By change in viscosity we mean the difference between the oil's initial viscosity at 100 deg. and its viscosity at the same temperature after being used. This has no reference to the change in viscosity which takes place in an oil when its temperature changes.

Although the great importance of selecting the correct viscosity of oil for any particular engine has been generally realized, the fact that the viscosity changes in service has not. Actual tests of crankcase oils at different times seemed to indicate that there was no change in viscosity but it appears that there was an error in interpreting the results of the tests.

The mistake was in assuming that the viscosity of crankcase oil was the viscosity of the lubricant, or true oil. The true lubricant in a crankcase is the actual oil itself, not the mixture of lubricant and dilution. The viscosity of a mixture of heavy gasoline ends and oil may be the same as the viscosity of another new oil but they differ greatly in lubricating value.

An oil tried out in a recent test illustrates this condition. Its original viscosity was 655 seconds at 100 deg., which, we will assume, is the figure to give the lowest rate of wear in this engine. After using the oil for 600 miles, the viscosity was 555 seconds at 100 deg. After comparing this with the original viscosity we would take this to indicate that the oil after being used is equally as good, if not better than before, and the slight decrease in viscosity is due to normal dilution. If any excess engine wear developed, we would blame it on the 13.4 per cent by volume of sludge present, which when removed left the oil apparently as good as before.

But we would be away off in our conclusions based on these tests. The same oil, taken from the same drum, was tested under different conditions which showed less than 2 per cent dilution. At the end of 600 miles the oil had increased its viscosity from 655 seconds to 1081 seconds and under similar conditions it would have increased in the first test. Therefore, the oil mixed in with other materal in the first test instead of having a viscosity of 555 sec., as measured, actually had a viscosity of about 1081 seconds diluted down to 555 seconds by approximately 13.4 per cent of gasoline heavy ends. The crankcase contained a mixture of 13.4 per cent heavy ends, 14.4 per cent of sludge and 72.2 per cent of oil with a viscosity of 1081 seconds at 100 deg. Such an oil would, under no consideration, be of equal lubricating value with true oil of 555 seconds viscosity.

The importance of the characteristics of the true oil in a crankcase, as distinguished from the mixture of oil, dilution and sludge, if any, is shown in another way. Gasoline and oil will mix together in all proportions but the result is not a new kind of oil; under

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"MANUFACTURERS LIKE LOW VISCOSITY for more power, more revs and more 'horses' but consumers think the only good oil for summer use is like molasses. They have not realized that they can lose more in the gas tank by using heavy oil than by the oil."—G. L. Neely, Standard Oil Co. of Cal.

"Apparently the only valid objection to a very low viscosity is increase in noise."—A. Ludlow Clayden, Sun Oil Co.

"Viscosity limits are: starting in cold weather, preventing excessive oil consumption and securing fluid film lubrication."—E. W. Upham, chief metallurgist, Chrysler Corp.

H. C. Mougey, Chief Chemist, General Motors Research Labs.

W. H. Graves, Chief Metallurgist, Packard Motor Car Co.

Experts Favor Crankcase Oils of Low Viscosity

By James W. Cottrell

TECHNICAL EDITOR
COMMERCIAL CAR JOURNAL

NO alert fleet manager needs to be reminded that engine lubrication is important. The total cost of oil for a fleet for, say, a year is no small item and the cost of repairs caused by faulty lubrication, which may reach ten times the normal expense, may run into large figures.

Selecting engine oils to insure good lubrication is, however, not a simple task. The characteristics and qualities of oils upon which a fleet manager is asked to pass are more complex than the molecular structure of the oil itself. The very factors which control lubrication are difficult to measure and still more difficult to evaluate. Test results frequently do not agree. So-o-o-o . . . Investigation . . . discussion . . . confusion . . . determination.

Bearing down upon this common problem the American Society for Testing Materials and the Society of Automotive Engineers recently assembled a group of all-star speakers in New York and invited interested parties to join in the procedings. Here's the report of the meeting:

Those who would choose oil wisely will, under no circumstances, overlook viscosity, and they should see to it that viscosity is not too high. Of the many qualities by which the suitability of an oil for use in an engine may be determined it is one of the most, if not the most, important. Other qualities must not be disregarded—would that we had a true test of oiliness—but unless viscosity is right the oil cannot be wholly satisfactory. Several speakers pointed out that volatility is another quality by which oil should be judged.

E. W. Upham, chief metallurgist, Chrysler Corp., suggested three basic requirements for viscosity in his paper, "Viscosity of Automobile Crankcase Oils as Related to Service Requirements," which was read in his absence.

The limits are: starting of the engine in cold weather, preventing excessive oil consumption, and securing fluid film lubrication. The paper explained that limits of viscosity for the third requirement would be met by oils which complied with the first and second requirements. The first and second requirements, however, conflict and "no crankcase oil is made at present which will meet the requirements of both the first and second."

Starting in cold weather engaged the attention of other speakers. Mr. Upham stated that it is the viscosity of the oil on the cylinder walls which drags down the cranking speed in cold weather; oil in the bearings has very little effect. This explains why "if an engine is stopped by pulling the choke rod out rather than by turning off the ignition switch the engine will be easier to start the next morning." (*Old timers, please note.*)

Oils "as thick as molasses" fared badly in the meeting. Mr. Upham was only one of the speakers who frankly favored lighter oils. He reported tests on truck engines which showed "the greatest power was produced with an oil that had a viscosity of less than 40 seconds at the cylinder temperature and 60 seconds at the crankcase temperature. No indication was found that lubrication with this oil was not entirely satisfactory, although the engine did

not run as quietly as with oils of higher viscosity."

Light oils were praised by W. A. Gruse, senior fellow, Mellon Institute of Industrial Research, Pittsburgh, in his talk on carbon deposits. Showing that the layer of coke is probably the "chief single obstacle to the advantages accruing from increasing the compression pressure" he dwelt upon the factors which control the formation of coke or carbon. They include: engine running conditions, oil consumption, time since last cleaning of carbon, amount of dust in air, mixture ratio, engine design and condition, fuel and oil. At one extreme he put an engine without an air cleaner running cool on a rich mixture, using a lot of high carbon residue oil as likely to suffer from carbon deposits and an engine supplied with dust-free air, running hot with a lean mixture and low oil consumption as probably free from excessive deposits.

Saving for the last paragraph his conclusions about viscosity, he said: "This study suggests the desirability of hastening the day when the average motor car can use, with tolerably low oil consumption, oils of much lower viscosity than the present S.A.E. Nos. 40 and 50. The adoption of such less viscous lubricants is probably the simplest means of remedying some of the troubles (carbon formation) and securing some of the advantages mentioned."

Changes which take place in oil after it is put in an engine crankcase were discussed by M. A. Dietrich, graduate student, Department of Chemistry, Ohio State University. It appears that they are numerous.

He showed that the changes are "dependent far more on the type of engine, its condition, and its manner of operation than upon the characteristics of the new oils as determined at present in the laboratory."

Volatility took a bow with viscosity at this point when Mr. Dietrich said: "The volatility of the oil, as measured by the spread in the distillation range, and the viscosity, in so far as it is affected by dilution at the time of service, are the only characteristics which appear to have some quantitative relationship to the changes which the oils undergo."

The changes are: decreased viscosity, flash and fire points, pour point and frequently specific gravity. (These changes are largely due to unburned heavy ends of the fuel.) Accumulation of metals, metallic oxides and frequently water. Accumulation of sludge and carbonaceous material. Increase in acidity, carbon residue and sulphur content and a very large increase of ease of emulsification with water.

By removing dilution and contamination it is possible to examine the changes in the oil itself as distinguished from the crankcase mixture of oil and other materials—many materials. The oil changes are: a slight decrease in a flash and fire points, a marked increase in viscosity and carbon residue and a minor change in specific gravity.

M. A. DIETRICH, GRADUATE STUDENT, DEPARTMENT OF CHEMISTRY, OHIO STATE UNIVERSITY

"Used oils from which dilution and suspended matter have been removed show a marked increase in viscosity and carbon residue."

The increase in viscosity becomes greater as volatility increases, especially in oils blended of two or more oils differing widely in viscosity.

Percentage of iron oxide in crankcase oil (perhaps an indicator of wear of cylinder, pistons and rings) is related to viscosity. One chart showed a marked increase in oxide percentage when viscosity at 100 deg. F. reached approximately 140 seconds, it being three times as much for 90-second oil as for 130-second oil, and approximately six times that of oils with viscosity at 100 deg. F. ranging from 150 to 210 seconds.

Factors controlling the formation of sludge were given as the extent to which the oil oxidizes or carbonizes during use and the presence of water.

When should the crankcase be drained? This question, from the floor, was in the minds of listeners. The speaker advised that the crankcases be dumped and cleaned on vehicles with oil filters at least four times per year, with the change in seasons, and that on cars without oil purifying devices the oil be changed at least once every thousand miles. These changes assist in flushing off and dissolving materials which might clog oil passages.

Oil consumption depends upon engine speed, engine design and wear, and oil characteristics, according to W. H. Graves, chief metallurgist, Packard Motor Car Co. Of these three the first two are "of far greater importance in oil consumption than the character or properties of the oil."

Viscosity and volatility were in the spotlight again during this paper. Mr. Graves dismissed flash, fire, pour, carbon residue "and such" as not important from the standpoint of consumption but dwelt upon viscosity and volatility. Oil consumption decreased with increased viscosity and then increased during tests reported in this paper. The tests also showed a wide difference in consumption of two oils of the same viscosity at 210 deg. F. but of different volatility. However, if the oils are sufficiently non-volatile for the service, differences in volatility do not affect oil consumption. High volatility may, however, double oil consumption.

A. Ludlow Clayden, research engineer, Sun Oil Co., Philadelphia, looked upon oil not as an added fluid but as a part of the engine and he found it a "part of extremely poor durability."

He reported tests of 1931 cars by the Standard Oil Co. of Indiana, showing that increasing speed from 30 m.p.h. to 55 m.p.h. increased oil consumption 2.3 times in the car least affected by speed increase, and no less than 19.8 times in the car most affected.

Comparing this increase in oil consumption by changing speed with a change in viscosity he showed that running at 55 m.p.h. with an oil of 80 seconds viscosity at 210 deg. F. the oil consumption was 125 per cent and with an oil of 55 seconds 175 per cent of consumption of an oil of 105 seconds at the same speed. These increases were much smaller than the increases due to increase of engine speed.

Considering oil as a part of engine design Mr. Clayden said that the most serious deterioration in crankcase oils is contamination by abrasives and that contamination with fuel probably is of very minor importance.

His last comment was a strong boost for light oils. "Apparently," he said, "the only valid objection to very low viscosity is increase in noise . . . General Motors Research Corp., has shown that engines can be run apparently indefinitely using very highly diluted lubricant."

Dilution has been removed from the list of current problems by automatic control of jacket and oil temperatures and by crankcase dilution, according to Mr. Clayden. He foresees the elimination of the sludge problem by devices for the control of oil temperature.

After Hours

Beer and Business

TRUCK business from breweries not only has not come up to expectations so far but, from all we can gather, it's a lucky salesman indeed who can even get a brewery executive to listen to his story. We even heard of one case where a brewer refused to take a salesman's truck literature because "he didn't have time to file it and it would only reach the waste-basket."

The truth is, of course, that brewers have been so rushed with orders since beer was legalized April 7, that they haven't had a real opportunity to study their transportation problems. We know of one honest brewer who was more disturbed about the quality of the beer he was compelled to make in order to satisfy his distributors than he was about his transportation requirements.

Unquestionably the brewers are in a trance and until they get a chance to come out of it the truck industry won't be able to get over its story. But it won't be long before this is possible.

Today the brewer's problem is production. Tomorrow it will be competition and then he'll have to interest himself in lower transportation costs.

"Boom" Beer—Bum "Biz"

IN meeting the production problem most brewers are unfortunately compelled to sacrifice the quality of their products. There isn't a brewer who doesn't hate to do this but he has no other choice. A lot of them are hoping for a temporary let-up in public demand so that distributors will keep off their necks and give them a chance to pay more attention to the beer itself. Some of them are even anxious to have other breweries start up. In New York City there are 16 licensed breweries. Before prohibition there were more than 50. Which caused one prominent brewer, who has been very proud of his beer's quality, to remark that he wished most of the 50 were back in business.

The let-up is sure to come. For one thing more breweries will get into operation and acquire a share of the business. For another the abnormal demand will slacken off—is already beginning to slacken, we hear. Natural causes are responsible: the faddists have had their fling and are beginning to see a glass of beer as the symbol of martyrdom; the real beer drinkers—those who smack their lips over a glass of good, mellow, full-bodied, creamy-foamed beer *(ach du lieber)*—recognize the deficiencies of today's "boom brews" and are deciding that they can best serve their own interests by buying as little as necessary.

So, in sizing up prospects it may be said that truck sales to the brewery vocation will get better about the same time that beer itself gets better. Competition will improve both.

Coordination

THE railroads, you have probably gathered from newspaper dispatches, are going to be coordinated whether they like it or not. It is all part of President Roosevelt's plan to switch the railroads on to the tracks of the Prosperity Limited. Coordination, as you know, will be in the hands of a Coordinator yet to be appointed.

Coordination, in the sense that it has been used in newspapers, seems to be restricted to railroads and their relations with and to one another. However, since the powers of the Federal Coordinator will be broad it may happen that he will confer such privileges on the railroads as will enable them to extend their activities to include the use of, say, motor trucks.

It is quite likely, for instance, that the Coordinator may pave the way for store-door-delivery service on a grand scale. There is no doubt that this form of transportation service has been neglected chiefly because of the tendency of railroads to engage in hopeless tariff and zoning disputes among themselves. The Coordinator will now be in position to make up the minds of competing railroads and the way will be open for extensive use of motor trucks to complete the haul between rail and store.

654 Calls = 1 Sale

THE need for dogged perseverance these days if one is to get anywhere in business is no better exemplified than in the records which a sales manager spread out for our amazement. The records showed that his best salesman averaged 48 calls per sale, and his worst, 654 calls. The average for his seven salesmen was close to 200 calls.

It is recognized, of course, that one man's "call" is just another man's "handshake" and still another man's "attempt." But regardless of how you define a "call," the records do prove that a man has to work exceedingly hard these days to produce.

The records are interesting for still another reason. The salesmen were selling the product of one of the leaders in the truck industry. The product is dominantly advertised in publications and by registrations running around the streets. You can decide for yourself how tough must be the lot of the salesman whose company is a long way from the top of the heap and not doing much to improve its position.

Corn-Fed Gasoline

WE predict that efforts down in Washington to compel operators of gas-engine vehicles to use a fuel blended of gasoline and alcohol will get nowhere. It will get nowhere not so much because oil refiners and gas distributors are opposed to taking a cut in their volume, and truck, bus and passenger car owners a boost in their operating costs, but because a Federal measure of this sort would not give corn growers the relief they want—and need.

It is quite possible to pass a law stipulating that every gallon of gasoline sold must contain 10 per cent of alcohol produced exclusively from corn grown in the United States. But with 30 million persons actively opposing the law what chance does it stand of being effectively enforced. These 30 million persons—passenger car owners, truck and bus operators, drivers and other direct and indirect employees of the automotive industry—are opposed to the proposal and would oppose the law. The net result would be the failure of another "noble experiment."

There isn't a man in the truck industry who would not like to see the corn growers get more for their corn. But certainly would not like to see this brought about by artificial stimulation at the expense of the automotive industry. It is estimated that a 10 per cent blend of corn-fed gas would increase the cost approximately 4 cents a gallon. Obviously this would have to be paid by the consumer. In the case of truck operators it would come out of the operator's own pocket or would be passed on to his customers and employees. Heaven knows he's got enough taxes to take care of right now, and it is questionable if his operating expense is increased half a cent a mile, whether he could pass all this on to his customers, competition being what it is in all lines of business.

Doubtless many operators would turn to Diesel-engined trucks. This would be legitimate evasion and coupled with all of the "illegitimate" evasion the net result would cause the corn grower to seek the solitude of his husks and meditate solemnly on the futility of artificial stimulation.

And Corn Likker

RATHER than seek to inflict adulterated gas on the country, we suggest that corn growers look hopefully to the future when the 18th Amendment will be completely repealed. If they will give the country some good corn whiskey they will earn a national benediction instead of malediction. It is our mature (the wits in the audience will say "aged-in-the-wood") opinion that the country has never seen enough good bourbon whiskey.—G. T. H.

POST SCRIPTS

Comments from Readers of Commercial Car Journal

WE'RE WASTING VOTES

I NOTICED a brief announcement in your February issue regarding my being a Republican member of the Washington State Legislature.

It has occurred to me that the automotive indusry has permitted a very unfair condition to exist by electing railroad employees to legislative bodies. In our 1933 session out of 46 members in the Senate there were two railroad employees and one doctor who has a hospital catering to railroad employees. In the House we had one railroad employee.

There were several bills introduced during this session which, if passed, would have seriously hampered our business. My presence as a member enabled me to prevent the passage of any bill detrimental to our industry.

My idea in writing to you is that I believe the automotive industry should encourage its members to have representation in the legislatures just as the railroads have been doing for years.—*Vernon A. Smith, Vice - President, Kenworth Motor Truck Corp.*

LICK BOTH PROBLEMS

PENDING legislation throughout the United States, and particularly on the Pacific Coast, is having a very serious effect on rehabilitation for two very good reasons:

To my mind the most serious of the two, in California particularly, is that the truck regulation we have is under the jurisdiction of our State Railroad Commission which has control of all public utilities. I believe that until we have a separate Commission to handle all phases of motor truck and bus operation, the operator, manufacturer, dealer and distributor will not be safe in planning his business very far ahead.

The other point is the taxes directed at our business. While we all realize a certain revenue should come from the industry, it seems that when the Federal, State, or Municipal Governments wants a revenue, the first thing it turns to is our industry. This, to my mind, is discrimination.

With these two very serious problems facing us, it is rather difficult to know where to start rehabilitation in the industry. —*L. A. Lundstrom, Manager, Fageol Truck & Coach Co.*

A BIT ROUGH

I HAVE not noticed an article dealing directly with the relation of sales executives to the sales producers on the firing line, but the replies to the several articles appearing in January and February issues all seem to touch on this subject, therefore I frankly suggest that factory executives make a close check of their force and it will not be at all surprising to find that the best men on the firing line are worth twice as much as their factory salesmanager, unless he came up from the ranks.

What the truck industry needs is sales managers (factory) with at least 10 years' wholesale and retail truck selling experience. This will give them a background that will better enable them to cope with dealer problems and their letters will carry a more human touch.

This frank expression came from a former factory salesmanager who has 17 years' continuous retail and wholesale work and is now regional supervisor with a leading truck manufacturer who ranks better than sixth in production.—*B. B., Chicago, Ill.*

WHERE PROFITS GO

THE writer has been asked to answer a statement in a recent issue of your magazine by S. M. Hawthorne entitled "Let Us Not Deceive Ourselves."

My opinions are founded on eight years of experience. I believe I am safe in saying that a large part of the grief experienced with used trucks should be charged to the dealer, and the sooner he will call himself to one side and admit that the truck operator is the smarter of the two, the sooner he will be able to bank some money he can really call his own.

Only last week one of the larger dealers called on his banker for help. He felt quite elated that he had sold 24 new trucks during the past year. The banker found that he had 18 used trucks in his back yard and made it plain that the profits made on new sales were tied up in the 18 used trucks. And the banker did not make the loan.

The only one reason for there being 18 used trucks on hand for this length of time is that he paid too much for them in the beginning. If it is true (as I believe it is) that 90 per cent of our sales wash out with our profit in the used truck, why is not the used truck problem the foundation of our business?

Very often we are not interested in determining what the used truck is going to do or how much it is going to earn, and I believe that these are the two essential questions in selling a used truck. If an operator is not in a position to pay cash for his truck and makes a small down payment, I would like to have someone explain to me how his payments are going to be made unless the truck will go out and earn the money.

After that comes the question of condition. If the dealer knows that the truck will not go out and do a certain job and he knows that the operator has nothing but his down payment, then he should know that he is licked before he starts. Nine times out of ten he will end up by going after his truck with a long rope.

So long as we look at our used truck problem with a candle light, so long will we be using red ink. I have in mind a dealer who said six years ago that he might go out through not getting enough business, but he was sure he would not take on bad business to bring this about. This dealer is still in business.—*F. P. Davis, Syracuse, N. Y.*

A ROSY FUTURE

THE interest of the nation has been centered around President Franklin D. Roosevelt and now that the necessary legislative action for the improvement of business is forthcoming we can attend to our "shipping" with full confidence.

Our production and distribution systems unmistakably are undergoing more drastic, far-reaching and beneficial changes than ever before recorded. Other things being equal, both producer and consumer more and more are demanding that their goods be delivered in the shortest possible time and with the least amount of expense, which is the result of a natural trend. To say that motor transportation is one of the first and most important factors in stabilizing business is putting it mildly. Once a shipper experiences the economy, speed and dependability of door-to-door shipping service as rendered by our modern motor express carriers, he is not easily persuaded to again resort to slow, uncertain methods which now have become obsolete.—*L. R. Kagarise, Keystone Express System, Los Angeles, Cal.*

YOUR HEALTH, SIR

WE thought your April issue a very good one—and especially your story on beer haulage problems.—*L. C. Allman, Sales Promotion Manager, Fruehauf Trailer Co.*

ANYBODY ELSE?

YOUR April issue came with its new typographic dress, and may I be one of the first of your readers to say that it is a big improvement over your old make-up. Congratulations!—*J. M. Orr, General Manager, Equitable Auto Co., Pittsburgh, Pa.*

THE OVERLOAD

A Truck Prospect—
when, as and if . . .

OUR OWN EAR TO THE GROUND DEPARTMENT

3.2% OF EXPECTATIONS — Business which the truck industry has netted as the result of beer totals just about 3.2 per cent of expectations. Comparing the scattered sales figures with our sense of taste we'd say that business, so far, is no better than the beer, so far. (If you are interested in any extended comment on the subject turn back to the "After Hours" page.)

AN EXPERT PALATE—In the matter of taste we're a beer drinker of long standing. We cultivated the taste back in the good old days. The 18th Amendment interrupted our beer-drinking education, but we had occasion to live in Cuba for a considerable time and there we took a post-graduate course in native and imported brews. In recent years we've been reduced to taking our beer—such as it was—where we found it. Speaking modestly, we have a taste for beer. And it is unfortunate indeed—a calamity, to be precise—that legalization has, to date, not given an answer to this veteran's prayer.

NOT A BELCH IN A BOTTLE—The full significance of the tragedy is in these words: We have sampled numerous brews but we have yet to smack our lips approvingly; we have yet to lick the foam lovingly from off our parched lips.

HELP! (HIC!) HELP!—Our sole consolation lies in the fact that there are, or were April 7, 178 licensed breweries in the country. We haven't sampled them all — yet. Perhaps the beer-drinking readers within sight of these words may have a happier tale to tell. In which case we'd be glad to know the label of the blessed bottle.

A 16-HOUR WEEK—Friends of Ed Loomis, manager of the motor truck division of the N.A.C.C., will be pleased to learn that his injured leg is definitely on the mend and he is now able to crutch his way to the office twice a week.

CONGRATULATIONS, DICK! — It was Ed who told us that Richard Armstrong, who is the official digester and analyzer-extraordinary of all forms of automotive legislation for the National Highway Users Conference, welcomed an assistant recently. It's a baby boy—as rangy as the modest papa.

DON'T RILE THE PUBLIC — The more considerate truck operators are of the public the more likely are they to get public support in an emergency. Thus a large national fleet executive believes that trucks governed at 30 m.p.h. should be routed away ffrom traffic peaks. He gave as the horrible example the case of two trucks, governed at 30, which last fall tied up traffic headed for a Yale football game so badly that traffic cops ordered the drivers to pull off to the side of the road.

NEWSPAPERS, PLEASE COPY — The records of a large fleet operating in New York show that 25 per cent of the fleet's accidents occur to its vehicles when those vehicles are properly parked on public thoroughfares.

FACTS AND FIGURES—The fate of "Facts and Figures," annual statistical publication of the National Automobile Chamber of Commerce, which hung in a balance for some time, has finally been decided. The book will be published as quickly as possible. In voting the necessary appropriation, the N.A.C.C. board of directors voted to continue a reference service which is as necessary today as it ever has been. We don't know whether the mailing list is being curtailed, but you can readily find out by writing S. D. Bryce, National Automobile Chamber of Commerce, 366 Madison Avenue, N. Y. C.

A ROYAL MAYOR?—Silas I. Royal, the oil chemist and lubrication engineer whose articles on truck lubrication are appearing in this journal, will be mayor of Linwood, N. J., by the time you read this if his friends have anything to do with it. The last time we spoke with him he was still not persuaded that politics was in his line. Anyway, it must be nice for him to know that he has the high esteem of his fellow-citizens.

RUNNING DOWN CRIMINALS — The horse is disappearing even from the ranks of the famed northwest mounted police. This famous corps will have to get most of its men by means of automotive vehicles. The corps is, in fact, becoming mechanized. It now has 13 trucks, 359 automobiles, 27 motor cycles and 101 boats. Horses number 256 and sled dogs 445. The force now has 2500 officers and men.

THE STORY IN A NUTSHELL—The Gimbel store in Philadelphia signalized a recent anniversary by comparing its progress with the progress of transportation. Under a photograph of discarded wood-spoke wagon wheels appeared this caption: "In 1911 we discontinued wagon deliveries; they were unsatisfactory, slow, costly and limited to the immediate neighborhood." Opposite it was a rubber-tired truck wheel with this caption: "Today a fleet of 120 motor trucks deliver about 15,000 packages a day—quickly, cheaply, to the entire Metropolitan Area."

"SEALED CHASSIS"—Recently we talked with a very highly respected truck-designing engineer. We asked him what he saw in the future. He said the time would soon come when factories would sell what he termed a "sealed chassis." By this term he meant that chassis would be sold with the understanding that all maintenance could be deferred to periodic check-up periods, occurring at 5000 or 10,000-mile intervals, when the chassis would be brought to the dealer or branch establishment for thorough inspection and adjustment, repair or overhaul as conditions called for.

THE DIESEL DEFICIENCY — Speaking of Diesels, this same engineer, who is by no means a Diesel opponent, said that before a truck assembler can really promote the Diesel idea wholeheartedly he must have a whole series of Diesel engines for practically his entire line of models. He explained that it isn't sound for a manufacturer to talk Diesel for one size of truck only. If the idea has any value it belongs in practically every size.

IS THIS A SHOCK?—We hear that a manufacturer of a gasoline truck plans to bring out an electric truck on a standard gasoline-truck chassis.

HALF-TON PASSENGERS—An interesting report, but one in which we don't put too much faith, is that an important truck (exclusive) manufacturer is seriously thinking about putting out a low-priced passenger car of his own to sell in rural districts. Fundamentally, it would be a passenger-car body on a half-ton commercial chassis.

A HIGH-SPEED TRACTOR—A new high-speed tractor, smaller and cheaper than models now in general use, is being developed. It is mounted on balloon tires, is capable of efficient performance at 25 m.p.h. on highways, and combines the features of a trucking and general farming instrument.

ANOTHER DIESEL DEVOTEE—Another engine maker is getting ready to announce a Diesel power unit. Final tests are now in process. If you're interested we'll gladly put you in touch with the manufacturer.

A KEG FOR THE KITCHEN—In New York we heard of a stainless steel beer keg of 4 or 5 gal. capacity for home use. It is a self-contained unit, requiring no tapping, no compressed air or carbon-dioxide gas—in fact, it requires nothing extra. It is expected that the unit will come in shapes for storage in electric refrigerators.—G.T.H.

Vocational Body Color Chart

Prepared exclusively for Commercial Car Journal
By Howard Ketcham, Director Duco Color Advisory Service

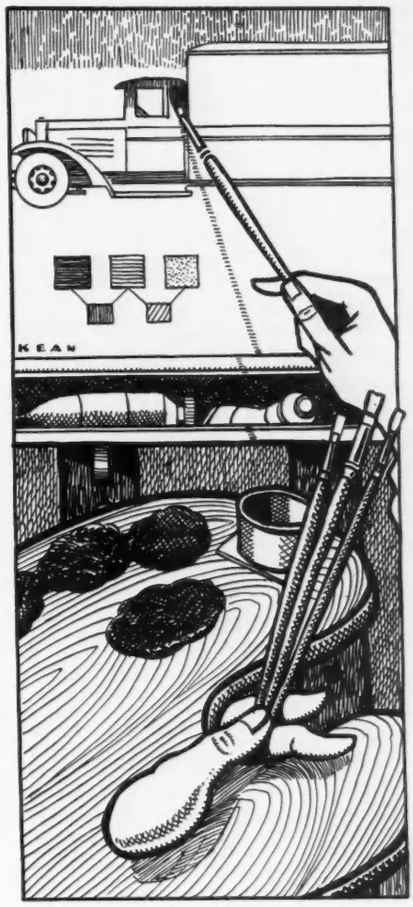
VOCATION	COLOR OPTIONS RECOMMENDED			REASONS FOR RECOMMENDATION
	Body Color	Trim Color	Striping and Lettering	
1. Automotive Service and Access.	Neutral 5	Neutral 4	Yellow Red Yellow 711	Inconspicuous finish desirable. Neutrals 5 and 4 are stanch, practical values quite appropriate in the field of their prescribed use.
2. Bakers (retail and wholesale)	Yellow Red 24	Yellow Red 24	White	This greyed brownish orange color bespeaks the crust color of baked goods. It is distinctive and unique.
3. Breweries	Yellow Red Yellow 34	Yellow Red Yellow 34	Yellow 811	Attractively represent mellow color of golden brew.
4. Bottlers	Green Blue Green 34	Green Blue Green 24	Red 210	Bottle Green is inherent to the product. The color is durable and effective in eye appeal.
5. Building Materials & Supplies 6. Contractors, General	Yellow Red Yellow 31	Yellow Red Yellow 21	Yellow Red 613	These warm greys are most utilitarian because of their practical dust-concealing appearance.
7. Creameries & Dairies	(a) Aluminum (b) Yellow 84	Aluminum Yellow 84	Blue 45 Blue 45	Aluminum has a unique ability to defy heat. A rich, cream color is appropriate. It is significant of health and energy.
8. Department Stores	Blue Purple Blue 25	Blue Purple Blue 25	Silver	Purplish blue suggests value and luxury.
9. Farms	(a) Yellow Green Yellow 34 (b) Red 314 (c) Aluminum	Yellow Green Yellow 34 Red 314 Aluminum	Gold Bronze Silver Black	Blend attractively with rural colorings.
10. Florists	*(a) Purple 48 (nondur.) *(b) Red Purple 410 (n.d.) (c) Green Blue Green 54	Purple 48 Red Purple 410 Green Blue Green 54	Green Yellow 76 Green 73 or Silver Red Purple 410	Luxurious, floral type colorings. Delicate and appropriate.
11. Fuel, Coal, Coke, Wood	Black	Black	Red 314	Practical—utility.
12. Furniture (ret., whlsle. & moving)	Green Blue Green 31	Green Blue Green 21	Green 73	Rugged, substantial, inconspicuous. Good will promoted by making vans appear smaller through adroit color choice.
13. Gasoline and Oil	(a) Red 314 (b) Yellow Red 613	Red 314 Yellow Red 613	Silver Black	Red and orange are symbolic of fire—the product of gasoline.
14. Grocers and Food Products	(a) Yellow 89 (b) Green Yellow Green 34	Yellow 89 Green Yellow Green 24	Red Yellow Red 38 Green Yellow Green 64	Crisp, clean, appropriate.
15. Hardware (retail & wholesale)	Blue 51	Blue 41	Blue Green 71 or Silver	Greyed blue is fitting hardware trade color because of its metallic aspect.
16. Ice Cream Delivery	Yellow 89	Yellow 89	Purple Blue 27	Party-like festive colors.
17. Laundries, Cleaners & Dyers	White	White	Neutral or Blue 35	Clean-looking in keeping with association of trade served.
18. Lumbering, Logging, Millwork	Yellow Red Yellow 711	Yellow Red Yellow 711	Green Yellow Green 34	Utility and appropriateness.
19. Meat & Meat Products	Red 210	Red 210	Silver	Suitable because not likely to show stains. Effective.
20. Municipalities	Yellow 42	Yellow 32	Yellow 85	Utilitarian—appropriate—good-looking.
21. Plumbing & Heating	Yellow Red 43	Yellow Red 32	Silver	Serviceable, practical, distinctive.
22. Produce (retail & wholesale)	Yellow Green Yellow 53	Yellow Green Yellow 33	Yellow 89	Significantly appropriate.
23. Public Utilities	Green 41	Green 31	Gold	Practical-looking and not too conspicuous.
24. Road Work	Neutral 3	Neutral 3	Neutral 7	Appropriate, dust-concealing, workmanlike appearance.
25. Specialty Shops	(a) Red 04 (b) Black (c) Purple Blue 04 (d) Green 23	Red 04 Black Purple Blue 04 Green 12	Gold Bronze Silver Blue 74 Yellow 84	In keeping with the dignity, character and refinement of color of the pleasure cars of the trade served.
26. Trucking & Warehousing	Green Yellow 31	Green Yellow 21	Green Yellow 71	Subdued colorings tend to create good will by decreasing the apparent size of the bulky conveyance.

* These colors are available but they lack standard durability. All colors referred to in the chart are standard "calibrated Duco colors." Color arrangements are here suggested for delivery units requiring special color distribution because of unusual design: DUMP TRUCKS—One overall color. REFRIGERATOR UNITS—One overall color. PLATFORM TRUCKS—Cab, hood, cowl and wheels in darker color; platform and chassis in lighter values. WHEELS on all oversize trucks have a greater appearance of strength if finished in dark colors. Cream-colored wheels on a warehouse van appear delicate and inappropriate.

Why Shouldn't Body Colors Interpret the Hauler's Vocation?

Tendency in industrial packaging is toward selection of colors that best represent the commodity itself

Ice cream containers, for example are resplendent in party colors. The advertising attention and reminder value derived from this practical mode of industrial embellishment lends itself admirably to most types of delivery fleets. If all trucks carrying beer were colored distinctively in colors readily associated with the colors of beer, then the aggregate advertising value to be derived from a general adoption of these colors would be incalculable.



By Howard Ketcham
Director Duco Color Advisory Service

THE delivery trucks of 1933 vintage are resplendent in colors that are best associated with the class of trade and the type of commodity they serve. Color used in this fashion meets a dual requirement. Both advertising distinction and aesthetic appeal are provided.

The idea is by no means new. The country's foremost package designer has been decorating coffee containers in variations of yellow red for some years. He points out that values of this hue best resemble coffee in appearance. Ice cream parcels are now resplendent in appropriate party colors.

In this way, color has been drawn upon to serve an interpretative function. The success met by the application of this sound merchandising idea has apparently appealed to truck fleet operators, to judge from recent color releases. Gasoline companies have colored their trucks in reds and oranges indicative of the color of flame associated with gasoline. Milk and ice cream conveyances are colored in similarly appropriate fashion. Florists have long appropriated purple, rose and delicate green colorings because they are symbolic of their trade. Just why so many refrigerator truck operators persist in overlooking the many advantages of aluminum paints as a trade asset is difficult to comprehend. It is a clean, serviceable, distinctive finish and one that possesses an important intrinsic advantage. This material, used on a refrigerator body exterior, will preserve the contents at several degrees cooler temperature than will regular colors. This is due to the fact that aluminum does not conduct heat readily.

Color, properly employed, is the least expensive and most impressive form of sales promotion that can be used by the up-to-the-minute fleet operator.

Colors properly combined and distributed have proved of real worth in these days of economic duress. For example, cleverly applied colors in a refinish operation have saved many thousands of dollars for truck fleet operators. Hundreds, who thought their fleet units hopelessly out of style, have given to their trucks many added months of creditable appearance through the sole and inexpensive medium of adroit coloration.

Old style department store delivery cars are being made to look less top-heavy, newer and generally more attractive at the low cost of a few coats of enamel. Passenger car color refinement and distribution has been carried over into the commercial car field, so important is the appeal of good appearance in the commerce of today.

Commercial car builders are unable in most instances to lower the top-lofty design of their products and at the same time provide the storage space required by their customers. Legislation limiting the length and width of truck dimensions has been the principal drawback in this connection. By following the approved procedure adopted by present day passenger car manufacturers for color distribution, truck users have been enabled in many instances to produce the same low effect color produces in passenger car bodies. Consequently we find that coloring, if properly adapted, lends its aid with powerful effect in producing a semblance of actual structural change.

The appearance of balance brought about by color in this manner is identical with that employed by nature. We are all of us familiar with the light color of the sky, the median value of the horizon color, and the lower or darker value of the earth color in contrast with these two lighter values. This arrangement of high, middle and low value colors serves to draw the eye down toward the base. It is the style of color balance used almost exclusively in embellishing the interior wall surfaces of rooms.

* These colors are available but they lack standard durability. All colors referred to in the chart are standard [illegible] One overall color. PLATFORM TRUCKS—Cab, hood, cowl and wheels in darker color; platform and chassis in lighter values. WHEELS on all oversize trucks have a greater appearance of strength if finished in dark colors. Cream-colored wheels requiring special color distribution because of unusual design: DUMP TRUCKS—One overall color. REFRIGERATOR UNITS—One overall color. on a warehouse van appear delicate and inappropriate.

guarantees full loads from the day his truck is ready to go. Sale is made, broker gets his commission, ranging from $15 to $150, depending on size and make of truck. Having a little working capital, he begins soliciting loads from shippers. Easy? Just whittle the price a dollar or two on the ton, then watch their eyes gleam with interest for selfish gains.

"'How's your equipment?' the shipper asks pleasantly.

"'Brand new 6-ton trucks, and fast service,' the broker answers. "And the contract is his. (It is funny, too, how *new trucks* often influence shippers to patronize a new line without the slightest investigation as to its reliability.) Soon more hauling jobs developed than one truck could handle, so the broker and truck salesman repeated the advertising dose time after time. Proud were the owners of these new trucks—independence, no boss to order them around now. Why hadn't they thought of this clever scheme before?

● How the Scheme Works

"In time the organization controlled 35 or 40 trucks, all bought by individuals on deferred payments. It was a good racket. The news spread, and soon other brokers engaged in the scheme They messed things up, until now there is not enough hauling to go around. Each new truck buyer is kept busy the first few weeks. After that, the broker begins to hold out on him. He defaults on payments and the truck is repossessed. It is just too bad he had to lose his life savings on a rosy promise, but that's his hard luck. As soon as one loses out, that opens a sale to a new sucker, and more commissions fall into the till.

"One broker, after turning over fat hauling jobs to his client for a month, informed him one morning that he had nothing now to haul but manure. The truckman objected, but was told, 'that or nothing.' The poor devil lost his truck. That 'manure job' was only a temporary sop to an easy let-down.

"In the mad scramble to get enough business to keep new truck buyers going a little while, prices were pushed deeper and deeper into the very dregs of red ink. Drivers, desperate to get a load at any price, often were inveigled into a trip to San Francisco and return for $12.50. They must pick up a pay-load there or no pay. Well, it *can* be done—it is 900 miles up there and back, but as many of these men often are kept on the road 26 hours without respite (a violation of the State law), they can make it in two days and earn fair wages, so they think. But the grit in the grease is that they must wait up there two or three days for a return load, and the $12.50 fees melt away in

The Freight Brokerage Racket—and Its Victims

(Continued from page 19)

hotel and cafe bills. The regular rate to San Francisco is $1.20 a hundredweight, yet freight often is taken there for 25 cents a hundred.

"How can brokers underbid prices already too low for profitable returns? What difference does that make to brokers? They don't own the trucks, have no depreciation, maintenance, insurance, bond nor operating expense. They get a good rake-off on every truck they help to sell, and 25 per cent on every load of freight carried. If the drivers abide by the laws, they must take out complete insurance coverage, and the broker deducts 10 per cent more for that. It is not uncommon for some fly-by-night brokers to withhold payments to drivers for weeks, and often fail to pay them at all. They never guarantee a rate, so they can take contracts from shippers at any price that will get the business. No matter what the hauler loses on a trip, the broker keeps 25 per cent of the gross hauling receipts of all shipments. Desperate for money, these drivers often evade State taxes and never think of taking out liability, property damage, cargo insurance or C.O.D. bonds.

"Money must be had for gas, oil, meals, food for his family, or maybe his truck breaks down, and a big bill is run up. He has a pocketful of C.O.D. money belonging to the shippers, so he dips, expecting to repay it some flusher day. That day rarely comes, and he flees rather than go to jail. One shipper lost a $1200 consignment that never was found, nor was the driver apprehended. Still another got away with several tons of steel. No bonds had been provided and shippers held the sack.

● How Cut Raters Make Up

"Financial losses, through low rates and idle equipment, frequently turn otherwise honest men into swindling schemers, and the public, ever alert to grab off a bargain, gets a sound mulcting. Here is an example. Family wants to move from San Francisco to Los Angeles. Enticed by the tempting ads of cut-rate transport lines, they ask for quotations. Agent comes out, looks over the stuff and estimates *about* 4 tons. That will be $150. He gets the job, hauls goods to destination and, before unloading, presents a bill for $210. The shipper puts up a howl. 'Why, you said it would be $150.' The hauler tells him *that* price was for 4 tons. 'You remember I said that, don't you? This weighs 5 tons and the price is $210.'

"From the facts presented, it will be apparent that the man who engages in the trucking business under the supervision of these wily schemers, winds up with a sad experience. On the other hand, shippers sooner or later lose all and more than they hoped to save by doing business with chiselers. Here on my desk are four letters received today from shippers who are holding the sack for C.O.D.'s. The smallest is $19—the others are for $80, $81 and $60.

At this moment the telephone rang, and your correspondent listened in on another phone. This is the conversation he heard:

"Say, we shipped a C.O.D. consignment to San Diego via the —— truck line and we can't get our money."

● The Shippers' Quandary

"I'll get your money, if they haven't folded up," the Board representative said. "I'll see them tomorrow. Meantime, I don't want to seem hard-boiled, but why do you patronize those concerns instead of franchised operators? Do you know that you are equally liable with these carriers, when you ship goods over wildcat lines? That the fine is $1000 or a year in jail, or both?"

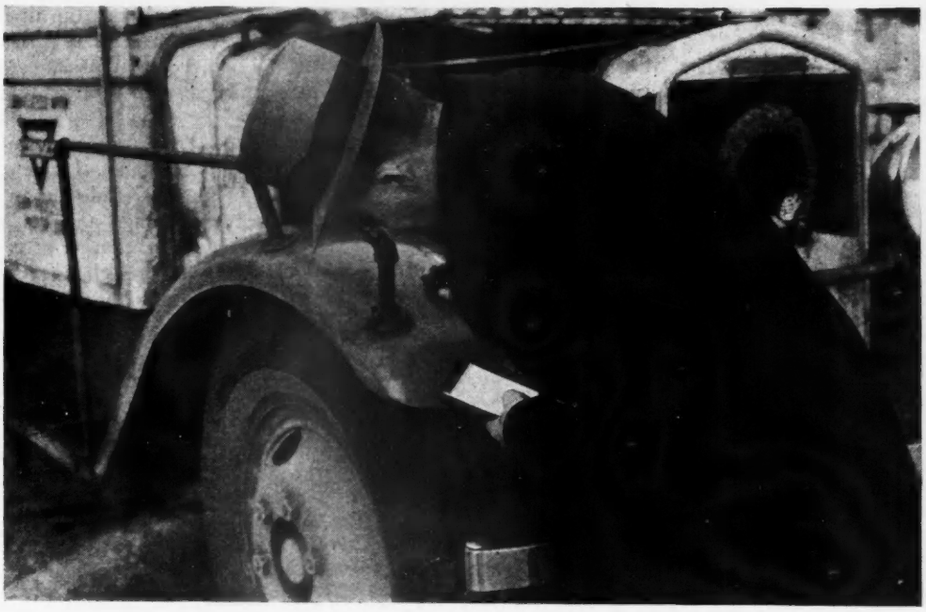
The shipper replied that he does this only when customers specify definite carriers. Then he asked, "How can we handle these cases without losing our customer's business, if we disregard their shipping instructions?"

"Your point is well taken," the lieutenant replied. "Simply advise them that you are liable under the state law and city ordinance for shipping via other than certificated operators."

"Do all truck dealers split commissions with brokers who wish to promote truck sales to unsuspecting individuals who'd like to set up their own transport lines?" your correspondent asked.

"Not on your life. When the old line experienced truck distributors got burnt on a flock of repossessions, they got wise and now refuse point blank to split commissions. At one agency, they kick these promoters out cold. Salesmen in this organization receive permanent vacations if they enter into any such plots.

"Some car dealers with trucks as side lines offer brokers the best opportunity today for exploiting unsuspecting buyers, but more and more of these sad experiences and repossessions are filtering back, and these dealers are demanding at least 40 per cent down, with balance in 12 monthly payments, instead of spreading them over 18 months as was once customary."



Keeping Tabs on the Tires Controls Tire Expense

Details of a simple system of keeping vital tire statistics that enables large national fleets to cut costs

By Joseph Brinker

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TIRE expense in a large fleet of trucks may be controlled by two fundamental means, namely, an individual tire card, and an accumulative monthly item of the money spent for tires.

Of course there are other control means but these are dependent upon the two fundamental control above stated.

The prudent fleet owner purchases tires at the lowest possible cost consistent with good quality and protects himself against non-uniformity of quality by arranging with the tire supplier to adjust tires upon some certain mileage basis. Adjustments have caused much dissention and unpleasantness between tire supplier and tire user. Therefore it is of great importance to the tire user to set down in writing any agreement concerning the basis of mileage adjustment. It is also important to agree in advance whether tires are to be adjusted at the purchase price or at the price existing at the time the adjustment is made.

One large fleet owner who went through several unpleasant episodes approached the problem from a different angle. He asked several tire suppliers to inspect his vehicles and determine the conditions under which they operated and the mechanical supervision under which they were maintained. He then asked them to submit prices for the tires required, on the basis of guaranteeing certain mileages for the different sizes of tires "against all defects in workmanship and material and against all hazards of every nature except accidents, chain cuts, bottle cuts and riding tires flat."

Contracts under these conditions were entered into with two of the bidders and proved very satisfactory. The prices agreed upon were slightly higher than under the usual mileage adjustment basis but were sufficiently low to assure very low tire-mile cost. The contract did away permanently with the

INDIVIDUAL PNEUMATIC TIRE RECORD

Tire No	Size	Make & Type	Date Purchased	Cost	Guarantee	Cost Per Mile	
875431201	32×6	Smith HD	10/25/30	$29.45	18,000	$0.0016	NEW ✓ ADJ

Truck Make and No.	Date On	Date Off	Position	Repaired Date	Repaired Cost	Odometer	Mileage	R R No	Remarks
482	11/2/30	9/27/31	R.R.	9/29/31	1.25	Finish 80,472 Start 73 684	6,788		punctured
1103	10/30/31	8/13/32	L.F.	8/15/32	.60	140 876 / 134 523	6,353		valve leak
601	8/16/32	12/2/32	L.F.	—	—	98432 / 96839	13,141 / 1,593		discarded
					1.85		14,734		adjusted
				Adjusted for			-3,266		OK J.M.S.
				12/21/32 on tire			18,000		
				#932 465 301					
				for $5.22					

Fig. 1—Individual tire card with entries.

Fig. 2

Tire Mileages and Costs—Size 32 x 6—as Determined from Summary of Used Tire Cards—Year 1931

	Tire A	*Tire B*	*Tire C*	*Average and Totals*
Mileage guarantee	15,000	20,000	18,000	16,950
Number of tires used	135	61	72	268
Tires exceeding guarantee	97	38	36	171
% exceeding guarantee	72	62	50	64
Guaranteed mileage	2,025,000	1,220,000	1,296,000	4,541,000
Actual mileage rendered	2,408,805	1,217,987	1,211,832	4,838,624
Excess mileage rendered	421,399	0	269,450	690,849
Average cost per tire	$ 26.05	$ 25.22	$ 28.12	$ 26.41
Cost per mile based on guarantee	$ 0.00174	$ 0.00126	$ 0.00156	$ 0.00156
Total cost of tires	$3,516.75	$1,538.42	$2,024.64	$7,079.81
Value of excess mileage	$ 733.23	$ 0	$ 420.34	$1,153.57
Reduces cost to	$2,783.52	$1,538.42	$1,604.30	$5,926.24
Net cost per mile	$ 0.00137	$ 0.00126	$ 0.00124	$ 0.00130
Average miles per tire:				
1930	18,997	15,236	13,474	15,902
1931	17,843	19,967	16,831	18,054

possibilities of continual wrangling about adjustments.

To make the above contract mutually acceptable, the fleet owner agreed to equip each motor vehicle with a commercially - accurate mileage - recording device to be kept in good working order at all times and to be used to compile a mileage record for each tire. These records were made available to the tire supplier at any time and were used as the acknowledged basis on which any tire which did not run its guaranteed mileage was to be adjusted.

The mileage record for each tire was made on the individual tire card, Fig. 1, showing the actual mileage run by the tire from its date of purchase until removed as unfit for further service.

The individual tire card provides the fundamental control on tire expense. The card record indicates each tire which has not delivered its guaranteed mileage. The difference between the actual and guaranteed mileage is readily calculated. The tire user then makes a claim for a credit for the undelivered mileage. This credit may be an allowance on the purchase of another tire or may be in cash in accordance with the agreement between the tire supplier and the user.

Because some tires run from 1½ to 2 years, it is evident that the tire user cannot wait that long for a check on his tire expense and some other control is necessary. The second control is the monthly summary of tire expense in dollars which is used to compare this item with the month previous and with the corresponding month of the previous year. If tire expense goes up, it immediately acts as a red flag. The tire expense in a going concern should not increase greatly from one month to the next or between one month and the corresponding month of the year previous with all factors, such as number of vehicles operated; mileage run, tire prices, etc., remaining constant. Exceptional conditions sometimes arise, however, which would justify an unusually high expense in a given month. In these cases making the item accumulative from month to month will enable the motor vehicle superintendent to check the expense at say the one-half-year period and spend less money in the second half of the year so that the net expense for the current year will be less than for the year previous.

To show the application of the control system, let us trace a tire from the time it is purchased until it is discarded as unfit for further service. The first step is to transfer the amount paid for the tire from the purchase invoice to the tire expense account for the month in which the purchase is made. Similar entries for all tires purchased during the month make up the monthly tire expense control.

The second operation is to pedigree the tire from the purchase invoice to one of the individual tire cards as shown in Fig. 1, which is filed under the head of "New Tires" and the tire itself placed among new tires in stockroom.

When the tire is removed from the stockroom and sent to a branch station or garage as a reserve tire, a notation of this fact is made and forwarded to the man in charge of the card file. He makes a pencil record on the card that the tire has been sent to a certain garage and transfers the card in the file from behind the heading of "New Tires" to a second heading of "Tires in Use."

Later, when the tire is removed from the reserve stock and placed upon a vehicle, either as a spare or on one of the rolling wheels, a record of the transfer is made on a "Tire Change" blank by the man mounting the tire. The filled-in "Tire Change" blank is forwarded to the man in charge of the individual tire card file. He enters the information given on the tire card as shown in Fig. 1 and transfers the card from behind the division of "Tires in Use" from reserve tires to a second subdivision of assigned tires or tires actually on vehicles as spares or on rolling wheels.

Each time the tire is changed from its original assignment, a "Tire Change" blank is made out by the man making the change and the blank sent to the man in charge of the tire card file. Each new change is recorded on the card until the tire is finally removed as unfit for further service. The total mileage run by the tire is then calculated as shown in Fig 1, and an adjustment obtained if the delivered mileage is less than the guaranteed mileage. The tire card is then transferred in the file from behind the subdivision of assigned tires behind the heading of "Tires in Use," to behind a third heading of "Used Tires."

The file of used tire cards is kept for a period of years and eventually builds up an accurate record of tire mileages actually obtained under existing conditions. This record may be employed to obtain average unit tire-mile costs according to tire size for use in charging against vehicles for which individual monthly or quarterly costs are kept. Tabulations also may be made to determine which make of tire has proved most economical in actual service and is therefore the make of tire to buy to reduce the total tire expense. The most economical tire may not be the tire having the cheapest initial price. The most expensive tire may deliver sufficient more miles than the least expensive tire to give the most expensive tire a lower tire-mile cost.

The tabulation (Fig. 2) shows a year's experience with three makes of a certain size of tire. Tire C, although highest in first cost, shows the lowest cost per mile run. This is due in part to the excess mileage rendered by the 50 per cent of the tires which exceeded their guaranteed mileage. It is interesting to note that while the actual mileage run by Tire C was less than the guaranteed mileage, it notwithstanding showed 269,450 miles of excess mileage rendered. The reason for this apparent discrepancy is the fact that credits were obtained for the difference between the actual and guaranteed mileage, while the thirty-six tires which exceeded their guaranteed mileage each ran an average of approximately 25,500 miles. However, Tire C should be closely watched since only half of them exceeded their guaranteed mileage as compared with 72 per cent with Tire A. If the tabulation includes all makes used of the size stated, the average cost per mile in the totals column of $0.00130 per mile may be used as the unit tire charge for trucks using that size of tires.

Fleet Accident Policies That Have Cut Down Premiums

THERE are many examples of fleet managers who have been able to reduce their insurance costs through a better control of accidents. There are many methods through which such results have been achieved.

Here is an example of methods developed by a cab company (Boynton Cab Co., Milwaukee) with about 125 operating vehicles, which resulted in the reduction of their accidents from about 1700 in 1929 to about 700 in 1931, though there was some decrease in mileage. New drivers are carefully selected, including a physical examination. They are well trained for their duties, and instructed that all accidents, no matter how trivial, must be reported immediately by telephone to the central office. A cruising supervisor is sent at once to the scene, and if his investigation indicates that the accident is likely to involve damages of any sort, a cash settlement of claims is made as promptly and as cheaply as possible. If the car of the claimant is damaged it is taken at once to the company garage and repaired. The report of the driver on the accident is in the form of an affidavit concerning all important details.

Drivers are heavily penalized for accidents, adjudged as due to their fault, through reductions from their pay, including the payment for damages to their vehicle or the other vehicle. Discharge is likely to follow as result of a serious and costly accident. This policy, though severe and not conducive to employer-driver good-will, has reduced accident costs to approximately one-fifth of what they were three years ago, and accident frequency to about one-third. The plan includes an office tabulation of the full cost for each accident.

The Hollander Express & Van Co., Chicago, with 19 vehicles, found that it was having a large number of backing accidents. This resulted in the establishment of a demerit system through which the drivers were laid off for a number of days corresponding to the extent of the damage and the amount of their pay. That is, if the damage was $21 and the man was earning $7 a day, he was laid off for three days. Drivers who have had several minor or serious accidents are discharged if the case seems to warrant. Some men who have shown a tendency toward accidents and fast driving are checked from time to time. No-accident awards are presented to the men who drive for a full year without a chargeable accident. This company has earned repeated reductions in accident premiums.

The Wieboldts Department Store, of Chicago, with about 80 trucks, has in effect a bonus system which awards $15 per month to a driver with a clear record. There are about 150 demerits relating to the driver's work, including the forfeiture of the entire bonus for a chargeable accident. There is a bonus award for additional mileage from tires above the mileage guarantee. Drivers with an unusually large number of chargeable accidents are called before a committee consisting of the delivery superintendent, the delivery manager and the assistant store manager to discuss in detail each of his accidents. Two or three chargeable accidents "in a row" may result in discharge.

The United Motor Coach Co. of Des Plaines, Ill., which has earned substantial reductions in accident rates and in-

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The steps which seemingly have been of most value to fleet managers in improving their accident records and cutting their insurance costs are as follows:

First, efficient and safe mechanical equipment, maintained in part through regular inspection by the driver, as a part of his safety training.

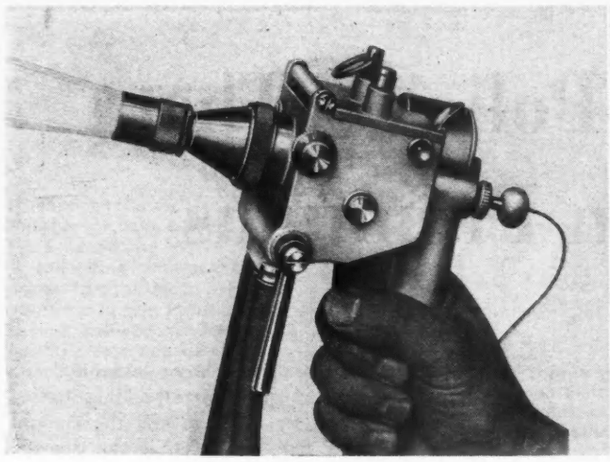
Second, careful selection and continuous efficiency instruction and safety education of the driver.

Third, elimination of the careless driver through careful follow-up of operating inefficiencies and accidents.

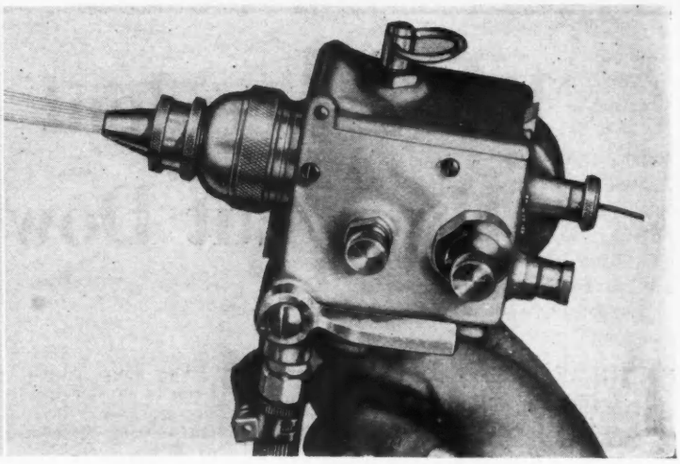
Fourth, making accident prevention an important function of management through complete accident records and budgeting of accident and insurance costs.

By R. R. Howard

Left—Drivers of the Hastings Truck Co. of Kalamazoo, Mich., who had no accidents at all in 1931. Right—Twenty-seven of the 29 drivers of The Evening Star Newspaper Co., Washington, D. C., who received safe driver awards of The National Safety Council in 1932. These drivers drove a total of 339,800 miles without an accident



The Metalayer metal spraying unit is offered by the Metals Coating Co. of America, Philadelphia, Pa.



Metallizing Co. of America, Ltd., Los Angeles, Cal., and Jersey City, N. J., makes the Metallizer.

Metal Spraying Has Variety of Uses in the Fleet Field

Eager, always, to tell our readers about economical fleet maintenance we are glad to submit this report of the possibilities of the metal spraying process, mentioned in an article in the March issue.

There are two manufacturers of this equipment in this country and, facing the almost unlimited fields of industry and building they have not devoted too much attention to the automotive industry.

Metal spraying is not a substitute for welding but is "traveling hand in hand with welding." The process coats metal, or even wood, surfaces with any of the common metals to any desired thickness. The applied metal can be machined as required.

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THE process of spraying metal, like paint, which has won acceptance in industry and in architecture is now attracting attention in the truck maintenance field. Fleet men seeing in the process another means of reducing costs are trying it out in a wide variety of jobs. A few large fleet organizations have purchased equipment, but, so far, most of them who are interested are having the work done by custom shops possessing this equipment.

Although an immense amount of research and development work was involved in perfecting the process and equipment, the apparatus is quite simple. Metal in the form of wire is fed into the center of a cone of flame, as in an oxy-acetylene welding torch, where it is melted and the fine particles are blown onto the surface to be coated by a blast of compressed air surrounding the cone of flame. The wire is fed through rollers driven by gear trains operated by an air turbine. Particles are projected at a very high velocity and on striking the surface they cool very quickly, imparting relatively little heat to the surface being coated.

The stream of incandescent metal particles discharged from the gun is more brilliant than the sparks produced in sharpening a chisel on a grinder. A person seeing the gun operate for the first time is a bit startled to see the operator adjust the gun by holding his hand right in the blast of molten metal. He is not burned. On striking the surface the blast coats on the metal very much like a spray gun puts on paint. The coatings are thin, something of the order of .002 in. to .006 in. but the coating may be built up to any desired thickness by applying one coat on top of the other.

The process is being used extensively to apply corrosion-preventing coatings to all sorts of mechanical structures, including tanks, pipes and parts exposed to the weather. It can be applied to objects too large to be plated and it is applied after parts or structures are completely assembled. In architecture, it is being used to apply metal finishes on terra cotta, tile and to apply bronze, aluminum and other bright finishes to iron or steel.

With practically unlimited possibility in these fields, it is not surprising that those interested in the development of the process and its application have not devoted all or even a major portion, of their interest to the automotive field.

Obviously the basic problems of applying a coating of metal to an object are the same in one field as in another. The metal spraying advocates have worked out many of these problems and their knowledge is helpful in solving problems which arise in automotive application.

Two companies are active in the metal spraying field in the United States, The Metal Coatings Co. of America, 495 No. 3rd Street, Philadelphia, Pa.. and the Metallizing Co. of America, Inc., 1218 Long Beach Ave., Los Angeles, Cal., with an eastern office at 214 Provost Street, Jersey City, N. J. Both companies sell metal spraying equipment outright, give engineering advice for installation and instructions for operation of the equipment. In addition, they supply engineering information to owners of equipment from time to time.

The surface to which the metal is applied must be prepared before the work is undertaken, by sand-blasting. It is obvious that the surface must be clean but the blasting performs two functions, first, cleaning and, secondly, roughening. It has been found that these metal coatings will not "take" properly on a perfectly smooth surface.

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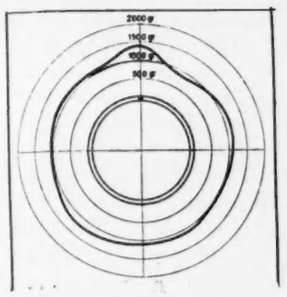
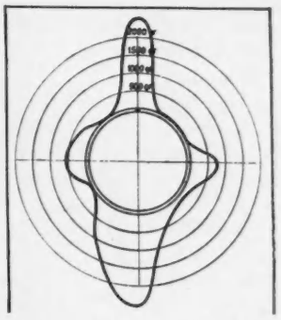


This chart shows fairly uniform distribution of cylinder wall pressure throughout ring circumference



This radial pressure chart shows un-uniform cylinder wall pressure—high at two points and low at four

Pity the Poor Piston Ring— It Lives the Life of a Slave

Like Cinderella, piston rings work hard without complaining and without getting credit for their accomplishments.

We asked engineers who design rings to tell us about the problems which confront them in meeting truck requirements. Their replies were amazing. They showed that piston rings are expected to overcome difficulties almost insurmountable; that rings built "in the good old days" simply could not meet present day operating conditions.

This article explains the conditions under which rings must operate and what they are required to do. The second article will explain the operating conditions that shorten ring life.

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"THE purpose of piston rings in an internal-combustion engine is to reduce to a minimum the leakage of gas from and the seepage of oil into the combustion chamber." These words are just as true today as they were 12 years ago when read before an S.A.E. section meeting by H. H. Platt. But what a difference there is in the meaning of the words!

Piston rings had the responsibility for curbing gas leakage and oil seepage then, as now, but the responsibility was of an entirely different character. A 1933 piston ring functioning in a 1921 truck driven in the 1921 manner would think it was on a vacation. On the other hand, a 1921 piston ring put in a 1933 truck would yell for mercy.

The unassuming piece of curved cast iron which we call a piston ring surely has plenty to do. Compression ratios and, therefore, compression pressures are higher. Engine speeds are very much higher—more than a few engines in current truck models are rated at speeds of 3000 r.p.m., or more. Which means that a ring, although brought to a complete stop every six inches, averages 3000 ft. per min. Which as a joke on an entirely different subject has it is "travelling steady by jerks."

This sudden starting and stopping and high speed make it no easier for the ring to follow the cylinder walls or to stay put in its groove. Three thousand revolutions per minute equal 50 per second, and if we imagine the cylinder to be slightly tapered we know that the ring has very little time to spread out as the piston moves from bottom to top dead center.

Rings must prevent the leakage and seepage in spite of a reverse of pressure taking place in the cylinder during the four strokes of the cycle. There is suction during the intake stroke, followed by rising pressure on compression, then a sudden boost in pressure during combustion followed, in turn, by decreasing pressure during the power and exhaust strokes, ending at about atmospheric pressure when the exhaust valve closes.

Aside from other results these changes in pressure inside the cylinder tend to move the ring up and down in its groove and in addition the inertia forces developed while the ring is being brought from standstill up to maximum speed and back to rest again tend to move the ring in the groove.

To make the ring's lot still more unhappy we demand that it control the oil on the cylinder walls, allowing just enough to remain to lubricate the swiftly moving piston and rings and prevent any excess oil from reaching the combustion chamber. Quite an order, is it not?

There are more complications. Several times as much oil as is necessary for lubrication is thrown on the cylinder walls. This is true even under ideal conditions and every maintenance man knows that conditions are not always ideal. Wear of connecting rod bearings in pressure lubricated engines increases the excess of oil thrown on the cylinder walls and when the rings are unable to handle the flood, the engine becomes an oil pumper.

When the cylinder and piston are worn badly the clearance between them becomes so great that the piston is able to rock back and forth and thus drag the rings out of true contact with the cylinder walls. The same rocking action and excessive clearance make it so much harder for the assembly to handle the excess oil.

Two more conditions which are frequently encountered should inspire our pity, or admiration, for the suffering ring. The ring has a right to a circular cylinder of uniform diameter throughout its length. But does it get it? If it does, inside mikes and dial

gages are mere ornaments. Out-of-round and tapered cylinders are not unknown.

The first requirement for a piston ring is that it shall contact the cylinder all the way around. This is the way a mechanic checks the ring when doing a repair job and factory inspection of rings includes this test. The factory test is frequently called the light test because the ring is placed in a gage and the inspector looks to see if light shows between the ring and the gage, which represents the cylinder wall, at any point.

Obviously, a test of fit between ring and cylinder wall is of the utmost importance because if the ring does not contact the cylinder wall, it will not properly perform either of its two primary functions. But this test alone is not enough for rings to be used in modern engines. It is like a civil service requirement that all applicants for appointment as policemen shall be at least 5 ft. 10 in. tall. A shorter applicant is ruled out but the fact that an applicant is 5 ft. 11 in. tall does not necessarily mean that he will be accepted. There are other factors to be considered in choosing a policeman—and a piston ring.

• Cylinder Wall Pressure

The pressure of the ring against the cylinder wall is being viewed in a new light. Formerly the total force needed to collapse the ring until the gap was closed was the only factor considered. This was measured by finger pressure or by a spring scale.

Now three results of a ring's springiness must be taken into account. The force mentioned in the preceding paragraph is called the tension and it has lost nothing in importance because the result of the force also is understood. That this force should be applied uniformly throughout the length of the ring is a natural conclusion, but there are exceptions in modern engines. Engineers generally agree that oil control rings should have uniform tension, and outward pressure, throughout their length, but this is not true of compression rings in high speed engines. At extremely high speed the ends of the rings sometimes vibrate, an action which is called "flutter." This action sometimes goes so far that the piston ring practically loses its effectiveness as a seal between the piston and the film of oil on the cylinder. Note, too, that the flutter may exist at one speed and not at another just a few hundred revoluions per minute higher or lower.

To overcome flutter many modern piston rings are made with more outward pressure at the gap than elsewhere. Measurements of radial wall pressure of rings are shown in the accompanying charts.

There is a difference between tension and wall pressure, which is important in modern rings. Tension is the spring-like force which causes the ring to expand and open the gap. Wall pressure is force with which the ring face bears against the cylinder wall and it depends upon the tension of the ring and the area of the ring in contact with the cylinder. If we cut a groove in the face of a ring we reduce the area of the ring in contact with the cylinder and thereby increase the pressure per square inch of contact area.

Because of the increase in speed the trend in piston ring design has been to increase the wall pressure. The higher the pressure per sq. in. on the face the greater is the ability of the ring to control oil. From this it might be assumed that the higher the wall pressure per sq. in. the better. But as in other problems of design, there must be a compromise. If the ring wall pressure is not high enough, there will be leakage of gas and of oil. If the pressure is too high, the oil film will be reduced too much and the ring and cylinder wall will wear too fast.

Speed is a factor to be considered in determining the ring wall pressure. At high speeds it is harder for the ring to follow the cylinder and to cut through the oil film than at low speeds, and the pressure chosen must be a compromise between low-speed and high-speed operation, unless there is a means of varying ring wall pressure in accordance with speed.

That piston ring upper and lower edges should be perfectly flat, true and parallel is obvious but meeting these requirements is by no means simple. With an up and down clearance of perhaps .002 in. the slightest snakiness of the ring will cause it to bind, perhaps only slightly, in the groove.

A simple way of increasing ring unit pressure per sq. in. is to reduce the area of the ring space in contact with the cylinder wall, or oil film. A large measure of the ability of the early oil control rings to control the oil was due to the fact that the groove cut in the face of the ring automatically increased the effective pressure of the face against the cylinder walls. Cutting a chamfer or a groove in the face of the ring tends to reduce the face area and increase the unit pressure. Oil control rings with grooves or slots in the face have higher wall pressure on the remaining surface and the grooves or holes in the rings provide a passage for the oil scraped off the cylinder wall to pass through the rings into the ring groove. From the groove the oil can be drained into the inside of the piston by drain holes, if desired.

All of these problems must be met in a successful ring, or set of rings, to be used in a new engine. Problems for rings to be used in engines which have been in use for varying periods are basically the same but in actual practice they are much different.

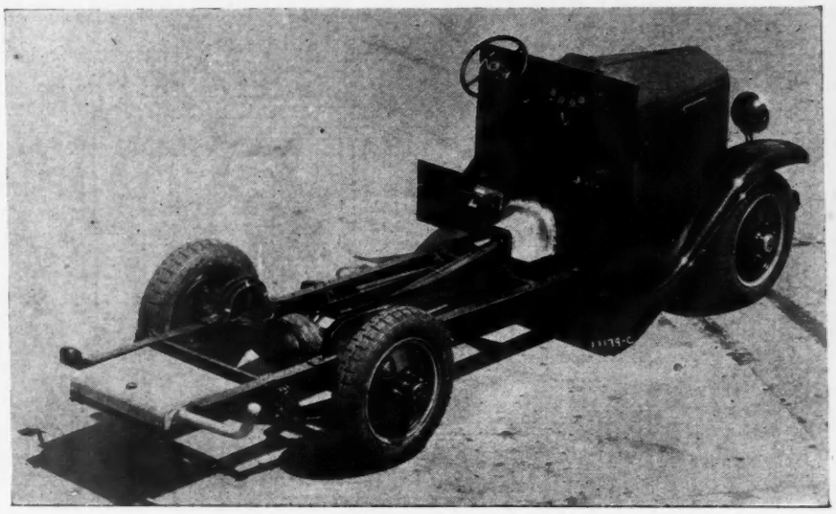
Wear in an engine increases the clearance between the pistons and cylinders. The corresponding wear that occurs on the face of the ring reduces its radial wall tension and increases the gap. Wear also occurs on the edges of the ring and on the grooves, thus increasing the up and down clearance of the ring. Changes that take place in the cylinder bores due to constant changes of temperature during long periods of operation are sometimes as serious as the actual wear that takes place in the cylinders. Pistons also change shape from alternate heating and cooling. One engineer of wide experience states that after about 5000 miles of ordinary operation the cylinders start to get out of shape.

• A Job for the Ring

Those in charge of maintenance of motor vehicles are expected to find ways and means of overcoming this gradual departure from perfection on the part of the internal parts of engines. When conditions are really bad, reconditioning the cylinders and installing new pistons and rings is the obvious remedy but under present day economic conditions, owners look upon this as a last resort. A long suffering piston ring is called upon to meet this situation. It is hard to imagine a ring which can adapt itself to contour of a cylinder which is out of round and tapered while moving up and down over the worn cylinder walls at 3000 r.p.m. With the added handicap of excessive throw-off of oil from connecting rod and main bearings with more than normal clearance, an increased clearance between the piston and the cylinder walls and the fact that the ring is called upon to operate in a groove which is worn, all proves that the lot of new rings in a worn engine is not too happy.

Designers of rings have met the challenge of these conditions and while they do not claim that their rings will cure an engine so bad that "the pistons turn sidewise in the cylinders" they have designed rings which will counteract, to a large degree, ordinary wear and postpone the day when the cylinders must be reconditioned and the pistons replaced.

The story of operating conditions unfavorable to rings will be told in a subsequent article. If this article has proven that a piston ring has a hard job and that the designer of a ring has a difficult task, it will have served its purpose.



At left is a view of the driver compartment and at right a view of the chassis of Reo's new door-to-door model.

Reo Adds Door-to-Door Unit to Line

Frame is dropped from cowl all the way to the rear

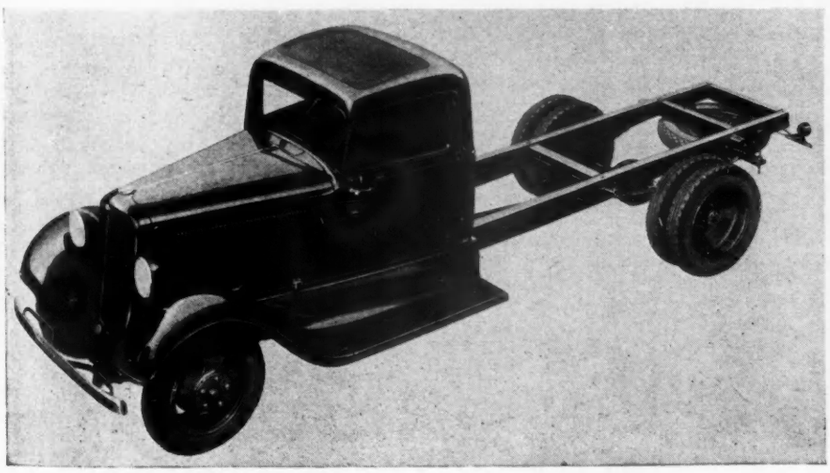
REO MOTOR CAR CO. offers a door-to-door delivery unit which is supplied with a body holding 56 milk cases, plus space for butter and cheese. When beer deliveries reach the house-to-house stage the unit can be adapted to this service in which relatively large capacity may be required.

Chassis specifications are the same as the four cylinder 1½-ton Model 1A with these exceptions: The frame is dropped 10 in., not just at the door opening but starting at the cowl and extending all the way to the rear. Rear springs are underslung and two heavy arches or cradles join the interrupted side rails over the axle housing. The engine is started automatically by a Startix.

Clutch and brake pedals are close together, extending backward from riser at front of driving compartment. The clutch pedal has a plunger near its forward edge operating a ratchet which locks the pedal in released position, when desired. Pressing this pedal all the way down also applies the brake. Both pedals may be depressed by one foot. A button on the floor starts the engine through the Startix and stops the engine on alternate downward strokes.

The body, 74 x 121 x 61 in., is framed of hardwood and carries galvanized steel racks with slides for cases. It is panelled on the outside with stretcher leveled auto body steel and on the inside to a height of 32 in. by galvanized steel. The floor is provided with drain holes for ice dripping and for cleaning. Side doors slide and are fitted with large windows and anti-rattlers. Rear doors are hinged and open full width of the body. The gasoline tank, flat and relatively shallow, is carried at the rear between frame side rails.

A special generator designed to keep battery charged at speeds of 10 to 15 m.p.h. is mounted on the four cylinder 3 13/16 x 4½ in. engine.



Dodge carries the hood back over the cowl and around the cowl ventilator.

New Dodge 1½-Ton Comes in 2 Types

Combines truck appearance with passenger car lines

A NEW 1½-ton six-cylinder truck which is available in two wheelbases has been added to the commercial line introduced earlier this year by Dodge Brothers. The new model, designated Series H 31 and 32, is priced $490 for 131-in. wheelbase chassis and $520 for the 157-in. job. The former is $95 less than the six-cylinder G-30 model and is less than the UG-30 four-cylinder chassis.

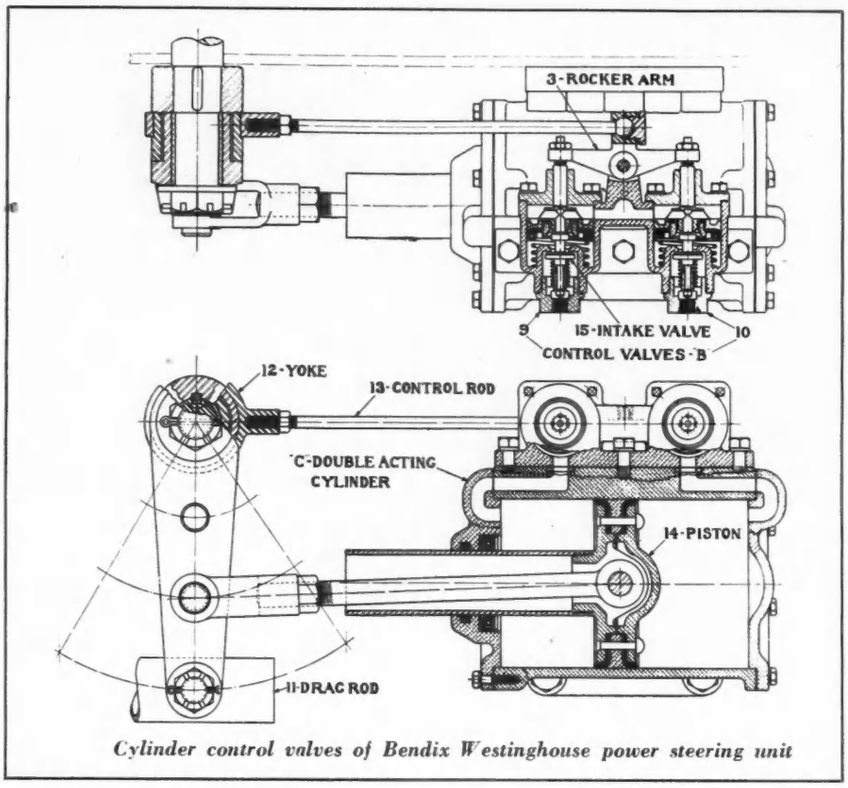
Prices of the H series are:

	131-in. wb.	157-in. wb.
Chassis	$490	$520
Chassis with cab	580	610
Panel	765	...
Platform	635	680
Stake	665	725

Production will be limited to these standard types for the present. Other body types will be available later.

The engine, 3⅛ x 4⅜ in., has ⅛ in. less bore and ⅛ in. more stroke than its predecessor. Piston displacement is less, 201 cu. in. instead of 211, but power and torque are about the same as before. Blocks are made of chrome-nickel-molybdenum and exhaust valve seats are inserted. Clutches, axles and brakes remain practically unchanged.

In the new trucks Dodge Brothers' engineers have combined truck appearance with modern passenger car lines. The radiator shell is high and sloping with V-shaped bar grill finished in enamel, side front splashers are integral with fenders and the cab is in the modern mode with sloping front edge on doors matching the windshield line.



Cylinder control valves of Bendix Westinghouse power steering unit

B-W Power Steering Unit Fits All Jobs

Operates by air taken from vehicle air brake system

A POWER steering unit, designated Air Steering Control, has been developed by Bendix-Westinghouse Automotive Air Brake Co., Pittsburgh, Pa., for installation upon any vehicle equipped with a conventional manually-operated steering gear. Air is taken from the vehicle air brake system.

Air Steering Control combines manual effort and power operation which provide the operator with a predetermined "feel" in proportion to the angle of turn. Because of its power action ratios of the steering gear may be reduced. Manual steering is, of course, available even if the air supply should fail.

The unit comprises a double acting air cylinder, air control valves, mounted on the cylinder (see illustration) and a combination of levers on the steering shaft. A hollow tube attached to the piston contains a piston rod which is free to oscillate at the piston end and is connected to the pitman arm by a clevis. Valves are actuated by a control rod connected to the control lever on the steering shaft. By admitting air under pressure to one side or the other of the piston, power is applied to the pitman arm in response to movement of the steering wheel. This control automatically reduces steering effort; also road shock and shimmy conditions. If the movement of the wheel due to shimmy is in the direction in which the wheel is turned, the air in the double-acting cylinder will be exhausted and pressure will be admitted to the opposite side. If the shimmy movement is against the turn of the wheel it will cause a slight kick-back on the control arm and increase the pressure on the control valve, adding resistance to the force of the wheel.

The steering unit was developed during a period of more than two years and then tested for more than 30,000 miles on a nation-wide tour.

Clark R Series Has Five Forward Speeds

Three new models are products of lengthy test

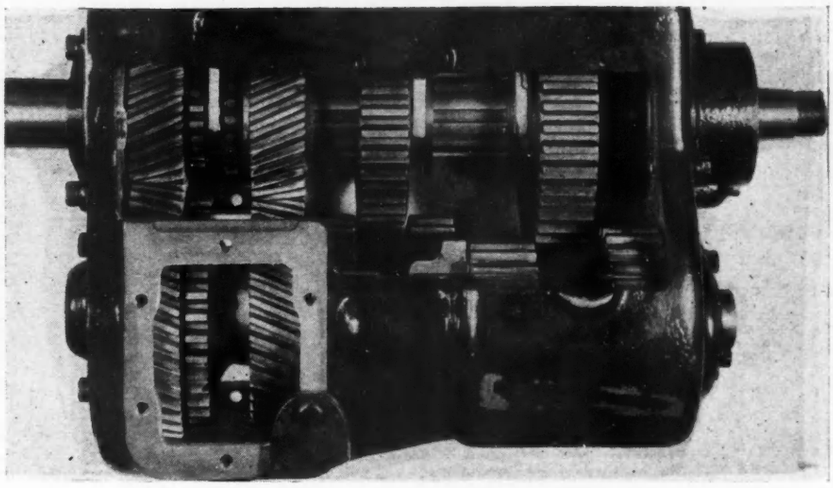
THE CLARK EQUIPMENT CO., Buchanan, Mich., is now producing three sizes of its Series R transmissions which incorporate five speeds forward and one reverse, fifth being direct and fourth a quiet helical constant mesh combination. The three sizes, which are intended for 1½, 2½ and 3½ ton trucks, were developed after long tests of the 1½ ton unit.

Ratios for the transmission were selected after exhaustive study, and tests which indicated that five ratios were required to meet operating conditions varying from starting heavy loads on steep grades and similar hard service encountered but a fraction of the time up to cruising at speed during 80 to 90 per cent of the time. It was thought at first that a five-speed set with direct on fourth and an overdrive fifth would be preferable, but tests and analyses decided in favor of direct on fifth.

An internal-external gear clutch engages fifth and fourth gears. The other ratios are provided by spur gears.

The gear shift lever travels in three "channels." Fourth is forward on extreme right, fifth back on extreme right. Second is forward center, third back in the center. A sharp jerk sidewise to the left carries the lever through an automatic latch so that reverse engages at left forward and first at left rear.

The R-500 series transmission (1½ ton) is rated to carry 160 ft. lb. torque, the R-900 (3½ ton) 300 ft. lb. of torque. Main shaft bearings are ball front and rear, countershaft bearings are ball type front and Hyatt rear. The 2½ ton unit is of similar design.



Clark's five-speed transmission has silent fourth

COMMERCIAL CAR JOURNAL NEWS

Trucks Get a Play

Motor transportation will be well represented during the eight-day International Automotive Engineering Congress to be staged by the S.A.E. in Chicago beginning Aug. 28. Clinton Brettell (R. H. Macy) and L. V. Newton (Byllesby) will speak at the Transportation Session over which J. F. Winchester (Standard Oil) will preside. J. M. Orr (Equitable Auto) will speak at a transportation luncheon. B. B. Bachman (Autocar) and David Beecroft (Bendix) will address the brake session with Merrill C. Horine (Mack) presiding. A. J. Scaife (White) and F. C. Horner (General Motors) will appear at the legislative sessions as chairman and speaker.

Truck Output Off 15 Per Cent

Truck production for the first quarter of 1933 was 56,901, a reduction of 15 per cent from the 66,725 for the same period in 1932. The most striking change when figures are classified according to capacities is a drop of 68 per cent in production of trucks rated at 3½ tons and more.

City Hard on Tires

City driving wore out rear tires three times as fast as cross-country driving and front tires wore 18 per cent faster, according to tests by the United States Rubber Co.

Tire Prices Rise

Tire prices did an about-face following their long march downward and have been advanced an average of 5 per cent. Even so, prices are lower than a year ago when the basic materials were about 30 per cent below present prices.

Bean Made Chairman

A. G. Bean, president, White Motor Co., has been elected chairman of the Board of Directors, succeeding A. R. Erskine. Directors have been reduced from thirteen to eight, new members including J. H. Watson, A. T. Rumpf and J. S. Condit. Paul G. Hoffman and H. S. Bass were reelected.

Anti-Freeze Prices Drop

Anti-freeze solutions will be cheaper next fall. The Glycerine Producers' Association has announced list price of $1.45 per gallon, the lowest price ever, on GPA Glycerine. National Carbon Co. announces that list on Ever Ready Prestone for the 1933-1934 season has been reduced from $4.45 to $2.95 gallon, in ¾, 1 and 1½-gal. containers.

Diamond T Gains

Diamond T Motor Car Co. report April sales were 40 per cent more than the same period of last year and more than any month since 1930.

Blending Action Postponed

A proposal to force blending alcohol made from agricultural products with gasoline has been postponed for this session of Congress, according to Chairman Pat Harrison of the Senate Committee on Finance. He said that he would confer with the House Committee to study the question and report at the regular session.

White Reports Gains

White Motor Co. district and branch offices show 22 per cent gain during the first quarter of 1933 as compared with 1932, and April business is 50 per cent better than March, says President A. G. Bean.

Reo Makes Reductions

Reductions ranging from $50 to $400 have been announced by Reo. New prices are: 1-1½ ton, 4 cylinder, $575; 1½ ton, 6 cylinder, $695; 2 ton, 12,500 lb. gross, $945; 2 ton, 15,000 lb. gross, $1,245; 3 ton, $1.795; 4 ton, $2,595.

Twin Coach Profits Up

Net profit of the Twin Coach Co. for the first quarter of 1933, after all charges, including depreciation but before provision for Federal income taxes, was $78,228.53, compared with $50,208.36 last year.

Liberty Is Air-Cooled

The famous Liberty 12-cylinder water-cooled aviation engine has been converted into an air-cooled power plant for tank trucks and tractors. Cooling is both external by floor and internal with a blast of air directed against pistons and walls.

Simmons Buys Silver

The Simmons Mfg. Co., Cleveland, Ohio, has purchased the Silver King Hydraulic Jacks Co., also of Cleveland. A new line of jacks will be offered.

Worthington Moves Offices

General and executive offices of the Worthington Pump and Machinery Corp. have been removed to a new building, adjacent to the plant, Harrison, N. J.

Bear Has Charts

Bear Mfg. Co. is distributing a wall chart giving front-end alignment specifications on 1933 cars, trucks and buses.

Chanter Made President

Arthur J. Chanter, first vice-president and general manager of Pierce-Arrow Motor Car Co., has been elected president, succeeding A. R. Erskine, who was reelected chairman of the board.

Wm. E. Metzger

Wm. E. Metzger, vice-president, Federal Motor Truck Co. and a director of the National Automobile Chamber of Commerce, died at his home, April 12, after a long illness. He was a pioneer of the industry.

Less to Pay

Two houses of the Legislature in Minnesota having agreed after many weeks of argument, motorists in that State will save from 26 to 50 per cent this year and next on licenses. One-ton class T trucks will pay 40 per cent less and those less than 1 ton, 50 per cent.

A. C. Gains Three Ways

A. C. Spark Plug Co. reports large gains in employment, production and sales for April. All departments worked full time and 200 employees were added. Sales increased 108 per cent in dollar volume over March sales and 40 per cent over April, 1932.

Federal Sales Better

Sales of Federal Motor Truck Co. during April showed an increase of approximately 40 per cent over March, making April, 1933, the best business month since April, 1932, according to J. F. Bowman, vice-president in charge of sales.

Goodwin Shell Manager

Dr. Ralph T. Goodwin has been appointed manager of fuel oil sales for the Shell Petroleum Corp., with headquarters at St. Louis. The fuel oil division includes Diesel engine fuels.

Moran to Mexico

G. G. Moran, who has been in charge of sales promotion in the South and Central American territories for the FWD export department, has gone to Mexico as special representative.

Cord Ups Salaries 5 Per Cent

A blanket increase of 5 per cent on all payrolls, effective May 10, has been announced by E. L. Cord, of The Cord Corp. Included in the companies affected are Lycoming Mfg. Co., L.G.S. Devices Corp. and Columbia Axle Co.

Continental Builds Diesel

Continental Motors Corp. is building two-cycle six-cylinder Diesel engines for the Navy Department. The engines will develop 200 hp. at 2000 r.p.m. The cylinders are 4⅝ x 5⅝. Sleeve valves control exhaust and scavenging torque, scavenging air being supplied by gear-driven Roots-type blowers.

Power Loss and Wear Vary with Oil's Viscosity

(CONTINUED FROM PAGE 20)

extreme heat the gasoline departs, leaving the oil to lubricate. For example, the cylinder walls and rings of the engine in the second test would be lubricated by an oil of 1081 seconds, not 555 seconds viscosity, and there would be a vast difference in the rate of wear when using oils of such different viscosity.

Viscosity alone is not accepted as a true measure of the lubricating value of an oil in a truck or automobile engine, as it is accepted for industrial lubrication, because viscosity changes with temperature. Practically every machine that requires lubrication, other than gasoline engines, operates at fairly constant speed, pressure and temperature but in the automotive engine speeds and pressure change and temperatures are higher. Therefore, no matter what S.A.E. viscosity we select the oil will have all kinds of viscosity in service. For example, if we use an oil of 300 seconds viscosity at 100 deg. it would be much lower at crankcase temperature, say 85 seconds, and only 45 seconds at top cylinder temperature. By regulating the engine temperature we could obtain the same viscosity from an oil with an original viscosity of 800 seconds at 100 deg.

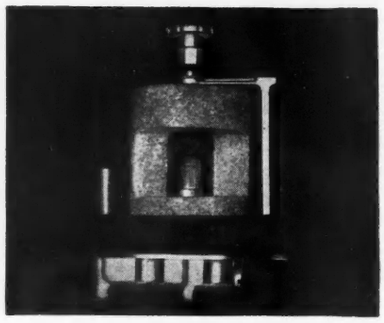
Tests of trucks in actual operation, parts of which were summarized in the article "Viscosity Decides Oil Drain Periods" in the February issue of COMMERCIAL CAR JOURNAL, show that the lubricating quality of an oil is indicated by its viscosity at 100 deg. and that the rate of engine wear and extent of power loss increase if the viscosity at 100 deg. is raised above normal.

Test of a third oil illustrates this point. This oil had initial viscosity of 488 seconds at 300 deg. After 300 miles of operation the viscosity was 666 seconds and the increase of 177 seconds denoted loss by evaporation of the light oil ends. Evidently the oil at 300 miles is not the same as it was at the beginning. It is composed of a higher percentage of molecules of higher boiling point and higher specific gravity.

Gasoline can be mixed with paraffin taken from crude petroleum to make up an oil which would have the same viscosity as any good lubricating oil at 450 deg., the average cylinder wall temperature. The gasoline-paraffin mixture would make a poor lubricant because the gasoline would evaporate when coming in contact with the hot cylinder walls and the paraffin would escape by running off the hot surface, and a large percentage would be decomposed.

Engine oils increase their viscosity in service at a rate which depends upon the condition of the engine and the amount of light and heavy ends in the fuel. The viscosity continues to increase until the oil becomes a thick viscous mass which does not evaporate from engine heat. If the oil is not diluted by unburned fuel its viscosity will continue to increase as long as its lighter elements are evaporated, or distilled, by heat of the engine.

The rapid increase in viscosity of oils between drain periods accounts for most of the excessive engine wear encountered in actual operation. Accepting viscosity of the crankcase oil in use as a measure of lubricating value has complicated the lubrication problem. Actual tests in fleet operation show that owners can control lubrication by simple tests and correct interpretation of results.



Klemm Automotive Products Co.'s new oil filter, the Filtrator requires no replacing or refills. Oil is filtered through an element called Chemistone, which is claimed also to prevent acid crankcase. The element is cleaned by an external knob which operates a brush. A safety valve, below the filtering chamber, allows oil to flow when starting in cold weather.

Motor Transportation and the New Deal

(CONTINUED FROM PAGE 9)

President Roosevelt has dealt so simply and so directly with other national emergency problems that it gives us of the motor truck industry firm belief that in dealing with the problem of transportation he will clearly recognize the contributions that flexible motor transportation can render in the next prosperous cycle.

Realizing the tremendous importance of a full rounded transportation system, the President will directly recognize the economic factors and incapabilities of each so that we may forge ahead with the intensive development of this major branch—motor transport.

We have the courage of our own convictions and we feel that President Roosevelt has demonstrated the courage of his convictions and will with characteristic directness clearly allocate to the motor truck industry its sphere of action and correlation in the reconstructed picture of National transportation for the next decade of prosperity to which, I say, the New Deal has been pledged.

Fleet Employers and Employees at Public's Mercy

(CONTINUED FROM PAGE 15)

frequently make special tools and fixtures. The management often refuses to invest in them, the cost is too great; can't spare the money now. The shop man is responsible for his job's standing up and he must make the tools necessary to permit a good job being done, if he can't buy them. Sometimes they can't be bought; they don't exist.

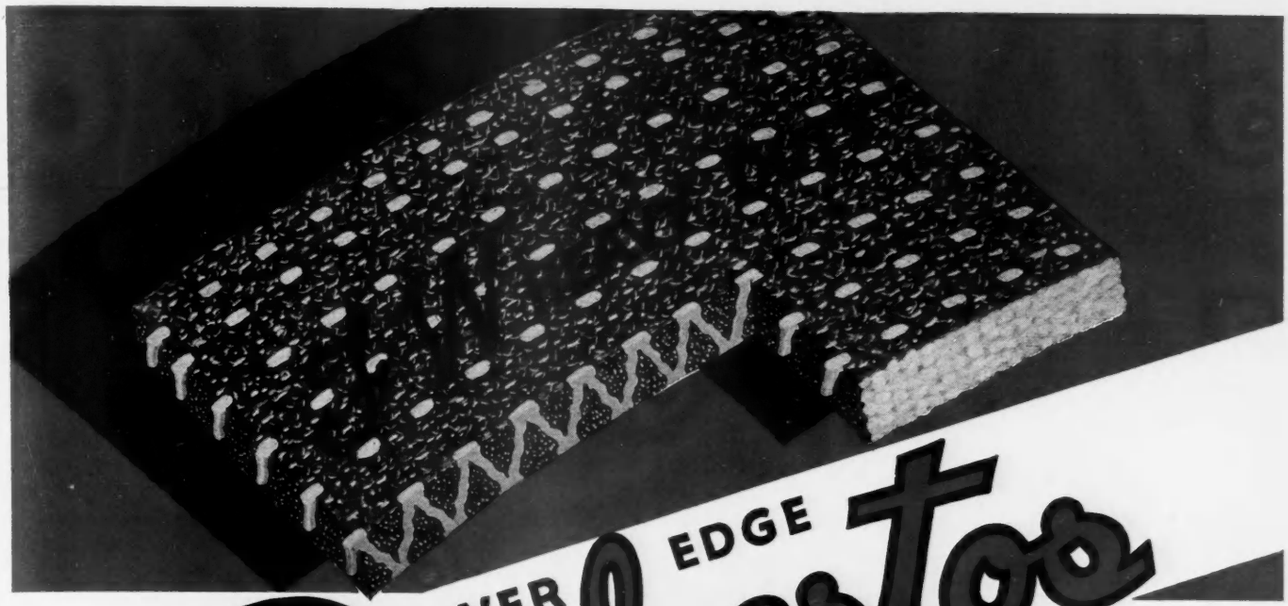
Too often shop space is set aside in a part of the building which is anything but ideal. Poor daylight, bad ventilation, a bad floor, cramped space, all hamper the men in their efforts to do good work quickly. This penny wise practice causes the cost to mount high above what it should be.

In most fleets there are periods of heavy repairing, caused by a variety of things, as a rush season, bad weather, snow, etc. At these times extra help is hired. The men bring their own tools in little boxes, everything piled in. It must be set on a bench or in a corner. When a man wants a certain tool he must hunt through the box. Time goes on. As he works about the shop he picks up all his stuff each move and makes several trips where one would do. A small cabinet over the bench on the wall would save its cost in the week or two that he is employed. Enough of these cabinets and tool trays for the steady men and the extras will quickly pay for themselves in time saved.

Adequate stock storage space is not always provided. The importance of this is very great for the storage of new parts and used parts, which may be damaged and need some salvage work. Many times it is possible to salvage an expensive part by a little welding, brazing or machining, and this work can be used as a snubber to take up slack labor in quiet times.

Few shop men are over-ambitious, but the universally poor working conditions make them restless. Give them a decent place to work, pay them enough to live decently and school their children, and they are loyal and dependable. There is no substitute for experience.

To be dissatisfied with things as they are is a virtue. It is from this that all improvement and advancement comes.



SILVER EDGE

Raybestos FW

HEAVY DUTY
Dispels Heat . . . .

RAYBESTOS FW Heavy Duty Brake Lining is a brute for punishment — most powerful and efficient lining of its type ever developed. This lining easily withstands the shocks, strains and excessive wear of heavy duty service and for that reason assures the utmost economy. Raybestos FW adds a factor of safety which is beyond price. Fleet owners everywhere use and endorse this brake lining.

DESIGNED on the "heat bridge" principle. Strands of large gauge plastic metal run through the lining from one side to the other. Strands are in direct contact with drum and lining surface at the same time. Heat radiates into shoe and adjacent parts. Herculean strength is an outstanding feature. FW is flexible and delivered in rolls.

The big swing is to specially compressed woven linings for the toughest service with easiest pedal pressure—Raybestos FW is the answer.

THE RAYBESTOS DIVISION
of Raybestos-Manhattan, Inc., Bridgeport, Connecticut

Metal Spraying Has Variety of Uses in the Fleet Field

(CONTINUED FROM PAGE 32)

The blasting produces a surface with microscopic depressions in which particles of metal from the gun lodge and adhere.

In automotive applications, it has been found that steel grit is, in most cases, more satisfactory than sand, especially for use in cabinet type machines. Much of the development of metal coating process has been along the lines of blasting equipment and technique. For relatively small objects, such as pistons, cylinder heads, etc., cabinets are used which enclose the parts and the sand blast nozzle is directed against them by an operator who peeps through a window and directs the blast through a curtain. Larger objects are blasted by placing them in a room or closet with the operator protected by a helmet.

● Arrangement of Cabinet

As in the case of spray painting, metal spraying can be done to a limited extent in an open room but it should be done in a compartment or a room with ample exhaust ventilation. Cabinets which have been arranged for this work embody a grid or grating on which the objects to be coated are placed, curtains or doors enclosing the front and permitting openings of any size desired and an exhaust fan at the rear. Oxygen and acetylene are supplied from tanks with regulators, as with welding outfits, and compressed air is taken from the shop air line. Air pressure supplied with the gun must be kept uniform throughout the job and for this reason pressure regulators usually are attached to the air line outlet.

Any of the common metals may be applied by the gun and one metal may be applied on top of the other. When applied to prevent corrosion, the coating is allowed to remain as applied by the gun. When the coating is applied to increase the size of a part or fill in a depression, the metal is machined or ground to size and shape desired. The coating as applied is naturally of the dull finish type but it may be burnished or polished.

An application of metal coating by the Metal Coatings Co. of America in the railroad field may be used in truck maintenance. This is rust-proofing of track joints. Butt joints of rails are held together by a plate on each side with bolts extending from one plate through the rail and the other plate, with a nut and washer on the outside. Because of corrosion in the bolt, plates and rail, which is wiped off by movement of the rail, it is necessary to tighten the bolts at intervals. This is the trackwalker's job. Rust-proof joints stay tight. The same rust-proofing process can be applied to chassis bolts, such as shackle bolts and in fact to the entire frame. Other applications by this company include spraying aluminum on cast aluminum radiator shells, coating tire molds to prevent sticking of casings, coating tire rims, applying decorative coatings to instrument panels and lettering bodies. Another interesting use of the process is coating the battery rack in an electric truck with lead.

The Metallizing Co. of America, Inc., has established a number of metallizing stations throughout the United States and it ties together the experience of these shops by means of technical bulletins sent out from the home office. New or unsual uses for metal spraying process are reported by the shops to the office and this information is passed on to other shops.

Experiments are being conducted, in cooperation with fleet owners, with coating the inside surface of cylinder heads with aluminum. The head is, of course, cleaned by blasting with steel grit and a coating approximately .006 in. thick of aluminum is then applied by the gun. Results, so far reported, show that the aluminum coating tends to reduce the formation of carbon and also reduces detonation. This is probably due to the fact that the aluminum conducts heat more quickly than the plain cast iron metal in the head. One fleet owner reported that after applying aluminum to the cylinder heads, he was able to use a cheaper grade of gasoline without trouble from detonation. Custom shops are charging approximately $1.50 per cylinder for the job, not including removing and replacing the cylinder head.

● Many Uses Seen

Among other uses for the metal spraying process by metallizing shops are: spraying pistons, building up worn pump and axle shafts, repairing cracked blocks and rust-proofing metal bodies.

Electro-plated pistons have been in use for some time in truck engines. The Metallizing process is used to apply either aluminum or tin to pistons to offset wear. The pistons are machined to size after building up.

Metal panel bodies have been painted with metal and it is found that the metal coating lasts longer than paint largely because paint peals off metal panels because of rust. The panels are prepared for coating by steel grit blasting and then coated with zinc or aluminum. Names are put on in bronze, using a stencil.

Trouble with corrosion of coal bodies is overcome by a Pittsburgh operator. He found that rain washing fine particles of coal into crevices of the body set up a sort of electrolysis which rusted the bodies. The bodies are now cleaned by grit blasting and coated with zinc.

● One for Brake Salvage

A custom shop has salvaged brake drums by building up with ordinary stove-pipe wire which is afterwards machined to size. This shop is also repairing cracked valve seats. The crack is cut out in a V and the space is filled in with steel wire and stove-pipe wire. Cracks in cylinder water jackets are repaired, without dismantling the engine, by use of the electric arc. In some instances, the weld is porous and these welds have been sealed by coating them with metal from the gun.

An unusual example of corrosion was reported from a fleet in the meat packing industry. Corrosion was blamed on drops of blood. This corrosion was stopped by spraying tin on the inside of the aluminum body. Another example of preventing corrosion is spraying of zinc on worn galvanized iron body floor plates.

In a succeeding issue details of typical metal spraying jobs will be given including salvage of axle shafts, cracked cylinder blocks, building up worn crankpins and coating exhaust manifolds.

Handy Has New Governor and a Speed Check

THE automatic, vacuum-controlled spark of the 1933 Chevrolet engine creates an entirely new condition in governor requirements because standard design of governor modifies the carburetor vacuum and even reverses some of the functions.

To meet this condition, the Handy Governor Corp., working with Chevrolet engineers, has designed a special new Handy governor with built-in spark control transfer. The automatic control functions under all loads and throttle openings.

The new Chevrolet model is now in the hands of Handy distributors and is available to Chevrolet dealers everywhere. List price is $17.50.

For salesmen's cars, light deliveries and other vehicles in which maximum power and precision regulation are not essential, Handy has developed a simple, low-priced, speed-limiting device which is being marketed as the Handy Speedchek. The new device is furnished only for carburetors of 1¼ in. Like other devices of this type, it is supplied with a lock and key adjustment.

For regular service, standard line is continued.

surance premiums, requires new drivers to take a physical examination and requires annual physical examinations. A recent check indicated that 16 per cent of the drivers had been having 40 per cent of the accidents. As a remedy it is planned that the drivers with the poorest accident records during the past six months will be required to attend a special class which will discuss in detail the reports of accident investigations made by their insurance carriers. Drivers are being trained that "perfect driving on the highway" is relatively more important than "maintenance of schedules."

The Columbia Terminals Co., of St. Louis, with about 800 trucks, tractors and trailers, as the result of including accident costs within its efficiency budget, during the past five years has made a considerable reduction in accidents and operating costs. It has reduced accidents from 818 in 1926 to 119 for 1931. This has been accomplished through special emphasis on safeguarding and the safe maintenance of mechanical equipment, careful selection of drivers in accordance with safe driving standards, and a bonus plan through which $25 is awarded to each man who drives for 12 consecutive months without an accident. In 1926 only five drivers achieved such awards, and in 1931 awards were given to 138 drivers.

One of the methods which enabled the Michigan Bell Telephone Co. of Detroit to reduce accidents by almost 50 per cent in four years was their "Drivers' Club," which is founded on the following "agreement":

●A Driver Pledge

"Realizing that the streets of our city can be made safe only by the exercise of care and courtesy by each person who drives a motor vehicle, I, as a driver of the Michigan Bell Telephone Co., pledge myself:

"1. To observe traffic regulations.

"2. To drive carefully.

"3. To let those pass who wish to do so.

"4. To give pedestrians, particularly children and elderly persons, opportunity to cross the street in safety.

"5. To render assistance and first aid in emergency. In short, to treat others as I like to have them treat me."

This pledge card when first circulated was promptly signed by 454 department drivers and soon the membership of the club had increased to nearly 1000.

The supervisor of highway safety of a large insurance company (The Liberty Mutual Ins. Co., Boston) believes in the safety checking of drivers but does not like the idea of asking drivers to "peach" on their fellow drivers. He

Fleet Accident Policies That Cut Down Premiums

(Continued from page 31)

believes that the successful safety committee cannot be vindictive, vengeance seeking, or "hard-boiled." He believes that "the reporting of traffic violations, committed by his drivers, to a fleet manager is one of the best psychological preventive measures which can be instituted *if it can be done without stirring up ill-feeling.*" He suggests the following plan: The fleet manager should call a meeting, and explain to his drivers that he had selected three men (whom he would name and whose cars he would describe) who were requested to report, for a certain period, all company drivers who were observed to be operating carelessly or disobeying traffic regulations on the streets. This was being done, he would explain, because some of the drivers as a result of their many routine duties unconsciously were developing certain unsafe driving practices, which if not checked would some day result in a bad accident. Therefore, he was asking all of his men to accept this arrangement in the spirit of good sportsmanship for the good of themselves and to improve the accident record of the company. "When I receive a report of a traffic violation," he would explain, "I am going to call the driver who is reported to my office, and we are going to talk the thing over in a friendly way. But after a driver has been turned in once, I certainly do not expect him to repeat."

The Washington *Evening Star*, with 86 automobiles, as the result of a vigorous safety program, reduced its claims made on its insurance company from a payment of $3,030.41 for 50 accidents in 1930 to a payment of $625.99 for 16 claims for the year ending April 30, 1932. The methods included the education of drivers through dashboard posters, a monthly safety booklet to each driver, garage display of large posters, careful records and follow-up of accidents, and the presentation of National Safety Council No-Accident Awards to all drivers who went for a full year without an accident.

The Dayton Power & Light Co. has been using quite unique methods to control traffic accidents. After having reduced its 1930 accidents by 25 per cent as compared to 1929, the company made a study of its driver accident records. It found that only 5 per cent of the drivers had been involved in 37 per cent of the accidents for 1930, and that about one-half of this group had had accidents during the previous three years. Therefore, it established a "Traffic Court" and set up psychological tests for a considerable number of the drivers through the use of the equipment of the Department of Education of Ohio State University in Dayton and in Columbus.

In Grand Rapids, Mich., inter-fleet no-accident contests have been conducted for the past two years, and a number of fleet supervisors are willing frankly to state that the good safety records made by their companies have been due more to the cooperative pride of their drivers in wanting to make records for their company than to the planning of management. As a result of these community-wide contests the Richards Storage Corp., as one example, with a fleet of 17 vehicles, in 1930 had its workmen's compensation insurance reduced 12 per cent and in 1931 the property damage and public liability insurance on its truck equipment was reduced 58 per cent.

The Dayton Co., of Minneapolis, with 46 gasoline and electric vehicles, had in 1926 a heavy increase of automobile accidents. An investigation of 62 of these accidents indicated that perhaps 75 per cent of them could easily have been prevented. A further analysis showed that these accidents were due mostly to negligence on the part of the drivers, such as speeding, inattention, ignoring right-of-way, cutting in, traveling too close, backing without signaling, sudden stops on wet pavement, and stopping and turning without signaling. The company started a strenuous campaign in accident prevention, through regular weekly safety meetings, placing of safety placards, and the announcement of a special no-accident bonus to drivers for going a year without an accident. As a result, it increased its mileage covered per accident from 8,043 in 1926 to 51,466 miles in 1930, regardless of the increasing traffic congestion.

●Just Two Reasons

The traffic manager of the Timken-Detroit Axle Co. credits his remarkable safety record of 12 trucks going for two years without a single accident to two things: Mechanically safe trucks, and a program of cooperative safety education among his drivers. The superintendent is described as a man who "does not believe in preaching to his men, but in having them teach each other." If a driver has a mishap during the week, it is threshed out at the regular meeting of all the men, and the other drivers pass judgment. During the period of two years the only accident which occurred to a driver was when one of them dropped a casting on his foot, causing four weeks of disability. A part of the safety training of his men is an insistence by the traffic manager on a thorough knowledge of all traffic laws.

COMMERCIAL CAR JOURNAL'S

CORRECTIONS ARE MADE EACH MONTH FROM DATA SUPPLIED DIRECT BY TRUCK MAKERS

Line Number	MAKE AND MODEL	GENERAL (See Keynote) Tonnage Rating	Chassis Price	Standard Wheelbase	Max. W. B. Furnished	Gross Vehicle Weight	Chassis Wt. (Stripped)	TIRE SIZE Front	TIRE SIZE Rear	MAJOR UNITS ENGINE Make and Model	ENGINE No. of Cylinders Bore and Stroke	TRANSMISSION Make and Model	TRANSMISSION Location and Forward Speeds	TRANSMISSION Aux. Location and Speeds	REAR AXLE Make and Model	REAR AXLE Gear and Type	REAR AXLE Drive and Torque	REAR AXLE GEAR RATIOS In High	REAR AXLE GEAR RATIOS In Low	FRAME Side Rail Dimensions	FRAME Type
1	A.C.F.	160	6	6950	186	222	26000	10170	B9.75/22	B9.75/22	HaS 160	6-4¼x5½	BL 1714	U 4	Op	Tim 76730	2F	R	7.46	52.7	8x3	P
2		175B	6½	8300	186	222	26000	10750	B10.50/22	B10.50/22	HaS 175	6-5x6	BL 714	U 4	Op	Tim 76730	2F	R	7.46	38.6	8x3	P
3		175A	7½	8800	186	240	30000	11610	B10.50/24	B10.50/24	HaS 175	6-5x6	BL 714	U 4	Op	Tim 79730	2F	R	7.48	38.7	8x3	P
4	Armleder	11Ha	2-3	1570	156	195	11500	4070	B7.00/20	DB7.00/20	Con 16C	6-3⅜x4½	Fu WOBB	U 4	No	Tim	BF	H	5.83	31.2	6x3x¼	P
5		21Ha	2½-4	2185	160	207	15300	4783	B8.25/20	DB8.25/20	Her WXB	6-3¾x4½	Fu MLU	U 4	No	Tim	BF	H	6.06	38.5	6x3x¼	P
6		31Ha	3½-5	2745	146	213	19500	5838	B9.00/20	DB9.00/20	Her WXC	6-4x4½	Fu MGU	U 4	No	Tim	BF	R	6.02	39.2	7x3x¼	P
7		41Ha	4-5½	3050	160	227	23000	6600	B9.75/20	DB9.75/20	Her WXC	6-4x4½	Fu MGU	U 4	No	Tim	BF	R	6.83	43.8	7x3x¼	P
8		61Ha	5-7	3625	146	227	24000	7400	B9.75/20	DB9.75/20	Her WXC2	6-4½x4½	Fu MGU	U 4	No	Tim	WF	R	8.5	55.2	8½x3x⅜	P
9		71Ha	7-9	4595	164	235	29500	7800	B10.50/20	DB10.50/20	Her YXC	6-4¾x4¾	Fu VUOG	U 5	No	Tim	WF	R	8.5	55.2	8½x3x⅜	P
10		TRDA	10	3895	148	174	39000	6450	B9.75/20	DB9.75/20	Her YXC3	6-4⅝x4¾	Fu VUOG	U 5	No	Wis	2F	R	7.8	56.8	7x3x¼	P
11	Autocar	R	1½	2250	159	189	.....	5370	B7.00/20	DB7.00/20	Own R	6-3¾x4¾	BL 234	U 4	No	Own A	SF	H	5.22	33.5	6⅛x3x⅜	T
12		RF	2	2450	159	189	.....	5750	B8.25/20	DB8.25/20	Own R	6-3¾x4¾	Own T	U 4	No	Own A	SF	H	5.22	33.0	6⅛x3x⅜	T
13		RG	2½	2600	159	210	.....	5975	P34x7	DP34x7	Own R	6-3¾x4¾	Own T	U 4	No	Own D	2F	H	6.21	39.3	8x3x¼	T
14		A	2½	3000	150	192	.....	6060	B8.25/20	DB8.25/20	Own SD	6-4x4¾	Own T	U 4	No	Own A	SF	H	5.22	33.0	8x3x¼	T
15		D	3	3500	150	192	.....	6100	P34x7	DP34x7	Own SD	6-4x4¾	Own T	U 4	No	Own D	2F	H	6.21	39.3	8x3x¼	T
16		DE	3½	3850	150	210	.....	6675	B9.00/20	DB9.00/20	Own SD	6-4x4¾	Own T	U 4	No	Own TE	2F	H	6.43	40.7	8x3x¼	T
17		DF	3½	3950	150	192	.....	6865	B9.00/20	DB9.00/20	Own SD	6-4x4¾	Own T	U 4	No	Own TE	2F	H	6.43	40.7	8x3x¼	T
18		DH	4	4150	150	174	.....	7250	P36x8	DP36x8	Own SD	6-4x4¾	Own T	U 4	No	Own N	2F	H	8.57	54.3	8x3x¼	T
19		N	4	4600	191	227	.....	8090	B9.75/20	DB9.75/20	Own SCH	6-4¼x4¾	Own T	U 4	No	Own N	2F	H	7.20	45.6	9x3x¼	T
20		NE	5	4725	149	170	.....	8300	B9.75/22	DB9.75/22	Own SCH	6-4¼x4¾	Own D	U 5	No	Own C	2F	H	8.57	50.1	8x3x¼	T
21		NF	5	4800	191	227	.....	8350	B9.75/22	DB9.75/22	Own SCH	6-4¼x4¾	Own D	U 5	No	Own TF	2F	H	7.20	42.1	9x3x¼	T
22		NH	5	4925	149	170	.....	8440	B9.75/22	DB9.75/22	Own SCM	6-4½x4¾	Own D	U 5	No	Own C	2F	H	8.57	50.1	8x3x¼	T
23		S	5	5500	158	168	.....	8800	B9.75/22	DB9.75/22	Own SCH	6-4¼x4¾	Own T	U 4	A 3	Own CG	2F	H	8.52	54.0	9x3x¼	T
24		SE	6	5800	158	168	.....	8950	B10.50/22	DB10.50/22	Own SCM	6-4½x4¾	Own T	U 4	A 3	Own CG	2F	H	8.52	54.0	9x3x¼	T
25		C	7½	6600	158	176	.....	10950	B10.50/24	DB10.50/24	Own SCM	6-4½x4¾	BL 734	U 4	A 3	Wis 78720	2F	H	9.92	121	10½x3x⅜	T
26		CE	7½	6000	172	203	.....	10300	836x7	DB40x8	Own SCM	6-4½x4¾	Own T	U 4	No	Own C	2F	R	8.57	52.6	9x3x¼	T
27		CBS	7½	6200	203	203	.....	9800	P42x9	DP42x9	Own SCM	6-4½x4¾	Own B	A 4	No	Own C	2F	R	8.57	52.6	9x3x¼	T
28		CF	7½	6900	164	182	.....	11280	B10.50/24	DB10.50/24	Wau 6RB	6-5x5¾	BL 734	U 4	A 3	Wis 78720	2F	H	9.92	121	10½x3x⅜	T
29		T	7½	6000	192	242	.....	9975	B10.50/22	DB10.50/22	Own SCM	6-4½x4¾	Own T	U 4	A 3	Own TG	2F	H	7.20	88.5	9x3x¼	T
30		TE	8½	6500	189	207	.....	10700	B10.50/24	DB10.50/24	Own SCM	6-4½x4¾	BL 734	U 4	A 3	Own TG	2F	H	7.20	87.6	10½x3x⅜	T
31		TF	8½	6800	195	247	.....	10950	B10.50/24	DB10.50/24	Wau 6RB	6-5x5¾	BL 734	U 4	A 3	Own TG	2F	H	7.20	87.6	10½x3x⅜	T
32		(T) FE	20	9500	180	180	.....	12300	B10.50/24	DB10.50/24	Ste LT	6-5½x6	BL 734	U 4	A 3	Wis 79731	2F	H	7.9	96.0	10½x3x⅜	T
33	(Eng.und.seat)	UD	3	3500	89	145	.....	6170	P34x7	DP34x7	Own SD	6-4x4¾	Own T	U 4	No	Own H & D	2F	H	6.21	39.3	7x2½x¼	T
34		UN	4	4600	96	163	.....	9040	B9.75/20	DB9.75/20	Own SCH	6-4¼x4¾	Own T	U 4	No	Own C & N	2F	H	7.20	45.6	8x3x¼	T
35		US	5	5300	98	163	.....	9380	B9.75/22	DB9.75/22	Own SCH	6-4¼x4¾	Own T	U 4	No	Own CG&TG	2F	H	7.20	45.6	9x3x¼	T
36		USE	6	5600	98	163	.....	9510	B10.50/22	DB10.50/22	Own SCM	6-4½x4¾	Own T	U 4	No	Own CG&TG	2F	H	7.20	45.6	9x3x¼	T
37		UTE	8½	6100	98	150	.....	10050	B10.50/24	DB10.50/24	Own SCM	6-4½x4¾	Own T	U 4	No	Own CG&TG	2F	H	7.20	45.6	10½x3x⅜	T
38	Brockway	80C	1½-2	1185	149	168	10500	4035	B6.50/20	DB6.50/20	Con 26B	6-3⅜x4	Wa T9	U 4	No	Tim 53200BY	SF	H	5.66	36.2	5⅝x2½x¼	C
39		90C	2-2½	1485	149	168	12500	4480	B7.00/20	DB7.00/20	Con 27B	6-3⅜x4⅝	Wa T9	U 4	No	Tim 54300H	SF	H	5.83	37.4	7⅞x2½x⅜	T
40		100C	2-3	1800	168	186	15000	4985	B7.50/20	DB7.50/20	Con 28B	6-3¾x4⅝	.....	U 4	No	Tim 54300H	SF	H	5.83	46.0	7⅞x2½x⅜	T
41		120C	2-3	2090	156	188	15000	5640	B7.50/20	DB7.50/20	Con 30B	6-4x4½	BL 314	U 4	No	Tim 54300H	SF	H	5.83	38.5	7½x3x¼	T
42		140C	2½-3½	2690	156	200	17500	6385	B8.25/20	DB8.25/20	Con 30B	6-4x4½	BL 314	U 4	Op	Wis 4916L	2F	R	6.66	43.5	7½x3x¼	T
43		150C	2½-3½	2540	188	200	18500	5800	B8.25 20	DB8.25 20	Con E600	6-3½x4½	BL 334	U 4	Op	Tim 56200H	SF	R	5.71	35.0	8x3x¼	T
44		141C	3-4	3175	170	212	19500	7450	B9.00/20	DB9.00/20	Con 30B	6-4x4½	BL 314	U 4	Op	Wis 70000L	2F	R	7.0	46.2	8x3x¼	T
45		160C	3½-4	3175	188	200	21000	.....	B9.00/20	DB9.00/20	Con 32B	6-4⅛x4½	.....	U 5	Op	Tim 58200H	SF	R	6.14	48.5	8x3x¼	T
46		170C	3-4	3450	170	212	19500	7700	B9.00/20	DB9.00/20	Con 33B	6-4⅛x4¾	BL 534	U 4	Op	Wis 70000L	2F	R	6.28	39.9	8x3x¼	T
47		175C	3-4	3850	170	224	24000	7900	B9.00/20	DB9.00/20	Con 34B	6-4⅜x4¾	BL 525	U 5	Op	Wis 70000L	2F	R	6.28	39.9	8x3x¼	T
48		195C	5	4000	170	224	24000	8540	B9.75/20	DB9.75/20	Con 33B	6-4⅛x4¾	BL 534	U 4	Op	Wis 1237H	2F	R	6.39	40.6	8⅛x3x⅜	T
49		220C	7½	4700	170	224	28000	8980	B10.50/20	DB10.50/20	Con 34B	6-4⅜x4¾	BL 534	U 4	Op	Wis 1627KH	2F	R	6.96	44.2	8⅛x3x⅜	T
50		260C	7½-10	5850	212	240	30000	9585	B10.50/22	DB10 50/22	Con 35B	6-4½x5¼	Fu MHU	U 4	Op	Wis 1737KH	2F	R	8.05	50.7	8¼x3x½	T
51	Chevrolet	Comm'l	½	330	109	109	4100	1995	B5.25/18	B5.25/18	Own	6-3x4	Own	U 3	No	Own	S½	U	4.11	39.7	5x2¼x⅛	C
52		Utility	1½	480	131	131	7500	2830	P30x5	P32x6	Own	6-3x4	Own	U 4	No	Own	S½	U	5.43	39.2	6½x2⅝x⅛	C
53		Utility	1½	510	157	157	7500	2920	P30x5	P32x6	Own	6-3x4	Own	U 4	No	Own	S½	U	5.43	39.2	7x2⅝x⅛	C
54	Chicago	1-15-E	2	1395	150	174	12000	4200	B6.50/20	DB6.50/20	Wau ZK	6-3⅝x4½	BL 224	U 4	No	Tim 53200H	BF	R	6.6	40.9	7x4x¼	T
55		1-25-E	2½	1885	160	208	14000	5100	B7.00/20	DB7.00/20	Wau TK	6-3⅝x4⅝	BL 224	U 4	No	Tim 54200H	BF	R	6.8	42.0	7x4x¼	T
56		1-30-E	3	2250	160	208	15000	5400	B7.50/20	DB7.50/20	Wau MK	6-4⅛x4¾	BL 314	U 4	No	Tim 56200H	BF	R	6.2	41.0	7x4x¼	T
57		1-35-E	4	2600	160	208	18000	5800	B8.25/20	DB8.25/20	Wau MK	6-4⅛x4¾	BL 314	U 4	No	Tim 58200H	BF	R	6.8	44.9	7x4x¼	T
58		1-50-B	6	3950	140	236	24000	7780	B9.75/20	DB9.75/20	Wau 68RL	6-4⅜x5⅛	BL 60 Max	A 7	No	Tim 65720H	WF	R	7.75	73.6	6x3½x⅜	C
59	Coleman	E52	2½	3800	20	144	12800	7200	B9.00/24	B9.00/24	Bud K393	6-4¼x4¾	Fu RU16	U 4	A 2	Wis CR15	2F	H	Op	Op	10x2½x⅝	B
60	(All 4 Wh.Dr.)	E53	3½	5300	30	180	15900	8000	B9.75/24	B9.75/24	Bud K428	6-4¾x4¾	Fu MRU16	U 4	A 2	Wis CR26	2F	H	Op	Op	12x2½x⅞	B
61		E54	4-5	5600	30	180	20400	8800	B10.50/24	B10.50/24	Bud L468	6-4¼x5½	Fu MRU16	U 4	A 2	Wis CR30	2F	H	Op	Op	12x2½x1¼	B
62		E55	5	6150	30	180	23000	9600	B11.25/24	B11.25/24	Bud L525	6-4½x5½	Fu MRU16	U 4	A 2	Wis CR30	2F	H	Op	Op	12x2½x1¼	B
63		E55S	5-6	7200	44	180	24500	10600	B11.25/24	B11.25/24	Bud L525	6-4½x5½	Fu MHU16	U 4	A 2	Wis CR122	2F	H	Op	Op	12x2⅝x1¼	B
64		E56	6-7½	7800	44	180	29800	11600	B10.50/24	DB10.50/24	Bud GF6	6-4¾x6	Fu MHU	U 4	A 2	Wis CR122	2F	H	Op	Op	12x2⅝x1¼	B
65		E57	7½-10	9700	44	180	32000	12400	B11.25/24	DB11.25/24	Ste LT6	6-5¼x6	BL 714	U 4	A 2	Wis CR122	2F	H	Op	Op	16x3x1¼	B
66	Corbitt	8B4	1½	980	134	134	8500	3200	B6.00/20	P32x6	Con W10	4-3⅞x4¼	Ow 8T	U 4	No	Own 8R	SF	H	5.4	38.4	5⅝x3x¼	P
67		8B6	1½	1080	136	136	8500	3275	B6.00/20	P32x6	Con 25A	6-3⅛x4	Ow 8T	U 4	No	Own 8R	SF	H	5.4	38.4	5⅝x3x¼	P
68		10B6	1½-2	1310	171	191	.....	3950	B6.50/20	DB6.50/20	Con 25A	6-3⅝x4	BL 214	U 4	No	Tim 53200H	SF	H	Op	Op	5½x3½x¼	T
69		9B6	1½-2½	2185	152	183	.....	4200	P32x6	DP32x6	Con 16C	6-3⅝x4⅝	BL 224	U 4	No	Tim 54200H	SF	H	5.57	27.8	7x3½x¼	T
70		12B6	2-3	3060	163	220	.....	4870	B7.50/20	DB7.50/20	Con E601	6-3⅞x4½	BL 334	U 4	No	Tim 56200H	SF	H	Op	Op	7x3½x¼	T
71		12W6	2-3	2950	165	220	.....	4910	B7.50/20	DB7.50/20	Con E601	6-3⅞x4½	BL 334	U 4	No	Tim 64800H	WF	H	Op	Op	7x3½x¼	T
72		15B6	2½-3½	3740	174	220	.....	5870	P34x7	DP34x7	Con E601	6-3⅞x4½	BL 334	U 4	No	Tim 58200H	SF	H	Op	Op	7x3½x¼	T
73		15W6	2½-3½	3850	183	224	.....	6160	P34x7	DP34x7	Con E601	6-3⅞x4½	BL 334	U 4	No	Tim 65200H	w/2F	H	Op	Op	7x3½x¼	T
74		18	2½-4	4400	178	230	.....	8100	P36x8	DP36x8	Con E602	6-4¼x4¾	BL 334	U 4	No	Tim 65720H	w/2F	H	Op	Op	8x3½x¼	T
75		24	3½-5	5115	195	230	.....	9200	B9.75/20	DB9.75/20	Con E603	6-4¼x4½	BL 60	A 7	No	Tim66720H	w/2F	H	Op	Op	8x3½x¼	T
76		33	5-7½	6160	195	230	.....	10000	P40x10	DP40x10	Con 21R	6-4¾x4¾	BL 60 Max	A 7	No	Tim68720TW	w/2F	H	Op	Op	8x3x⅜	T
77		(T)10B6T	3-5	1650	(3)	(3)	.....	3950	B6.50/20	DB6.50/20	Con 16C	6-3⅜x4⅝	BL 224	U 4	No	Tim 53200H	SF	H	Op	Op	5½x3½x¼	T
78		(T)9B6T	4-6	2600	(3)	(3)	.....	4200	B7.50/20	DB7.50/20	Con E601	6-4¼x4½	BL 334	U 4	No	Tim 54200H	SF	H	Op	Op	7x3½x¼	T
79		(T)12BT6	4-7	3465	(3)	(3)	.....	4870	B8.25/20	DB8.25/20	Con E602	6-4½x4½	BL 335	U 4	No	Tim 56200H	SF	H	Op	Op	7x3½x¼	T
80		(T)15B6T	5-8	4875	(3)	(3)	.....	5870	B9.00/20	DB9.00/20	Con E603	6-4¼x4½	BL 335	U 5	No	Tim 58200H	SF	H	Op	Op	7x3½x¼	T
81		(T)18D6T	8-10	5500	(3)	(3)	.....	8100	B9.75/20	DB9.75/20	Con 22R	6-4½x5¼	BL 535	U 5	No	Tim 75720H	2F	H	Op	Op	8x3½x¼	T
82		(T)24D6T	10-15	6500	(3)	(3)	.....	9200	B10.50/20	DB10.50/20	Con 16H	6-4¾x5¾	BL 7212	U 4	U3	Tim 66720W	2F	H	Op	Op	8x3x⅜	T
83	Dart	30G	1½-2	1595	150	180	11200	4900	B6.50/20	DB6.50/20	Her WXA2	6-3½x4½	Fu MLU	U4	No	Tim 53200H	BF	H	5.14	32.6	6x3x¼	P
84		40G	2	2195	150	180	13400	5650	B7.50/20	DB7.50/20	Her WXB	6-3¾x4½	Fu MLU	U4	No	Tim 54200	BF	H	6.8	34.9	7x3x¼	P
85		50G	2½-3	2725	150	180	16300	5750	B7.50/20	DB8.25/20	Her WXC2	6-4½x4½	Fu MLU	U4	No	Tim 56200	BF	H	6.16	31.6	7x3x¼	P
86		60G	3	3250	166	208	20700	7425	B8.25/20	DB9.00/20	Her WXC3	6-4¼x4½	Fu JVUOG	U5	No	Tim 58200	BF	H	6.8	48.4	7x3x¼	P
87		80W	4	4450	170	220	25600	8500	B8.25/20	DB9.75/20	Her YXC2	6-4½x4¾	Fu VUOG	U5	No	Tim 65720	WF	H	6.8	48.0	7x3x¼	P
88		100W	5	5500	170	235	33600	10500	B9.75/20	DB9.75/20	Her RXC	6-4¾x5¼	Fu MHU	U4	A 3	Tim 66720	WF	H	6.8	84.8	7x3x¼	P
89		150W	7½	6500	170	245	46100	11500	B9.75/20	DB10.50/20	Her HXB	6-5x6	BL 735	U5	No	Tim 68720	WF	H	6.8	42.7	9x3½x⅜	P
90		200W	10	8500	180	250	40400	12500	B9.75/20	DB10.50/20	Her HXB	6-5x6	BL 735	U5	No	Tim SW310	WF	H	6.8	42.7	9x3½x⅜	P
91	(4 Whl. Dr.)	60	4	5750	180	200	19000	8700	B9.00/20	DB9.00/20	Her WXC3	6-4¼x4¼	Fu JVUOG	U5	A 2	Wis 69317B	DF	H	8 4	153.	7x3x¼	P
92	(4 Whl. Dr.)	80	6	6800	180	225	24000	11000	B9 75/20	DB9.75/20	Her RXC	6-4½x5¼	Fu VUOG	U5	A 2	Wis 1237	DF	H	8.0	152.	9x3½x⅜	P
93	Diamond T	210SF	1½	545	135	158	8500	3250	B5.50/20	B6.50/20	Her JXA	6-3¾x4¼	WG T9	U 4	No	Cla B364	S½	H	5.4	34.6	7x2⅜x⅛	T
94		210FF	1½	565	135	158	8500	3250	B5.50/20	B6.50/20	Her JXA	6-3¾x4¼	WG T9	U 4	No	Cla B373E	SF	H	Opt	Opt	7x2⅜x⅛	T
95		225	1½	745	135	158	10000	3500	B6.00/20	DB6.00/20	Her JXA	6-3¾x4¼	WG T9	U 4	No	Cla B410	SF	H	Opt	Opt	7x2⅜x⅛	T
96		240A	1¾	795	137	167	10000	3500	B6.00/20	P32x6	Her JXA	6-3¾x4¼	WG T9	U 4	No	Cla B410	SF	H	Opt	Opt	8x3x⅛	T
97		310	2	995	155	179	12000	4200	B6.50/20	DB6.50/20	Her JXB	6-3¾x4¼	WG T9	U 4	No	Cla B613	SF	H	Opt	Opt	8x3x⅛	T
98		260	2	945	155	179	11000	4000	B6.50/20	DB6.50/20	Her JXA	6-3¾x4¼	WG T9	U 4	No	Cla B613	SF	H	Opt	Opt	8x3x⅛	T
99		350	2½	1295	155	179	14000	4700	B7.00/20	DB7.00/20	Her JXC	6-3¾x4¼	Cla R103	U 5	No	Cla B642	SF	H	Opt	Opt	8x3x⅛	T
100		325B	2½	1195	155	179	13000	4600	B7.00/20	DB7.00/20	Her JXB	6-3⅝x4¼	WG T9	U 4	No	Cla B642	SF	H	Opt	Opt	8x3x⅛	T
101		325DE	2½	1345	155	179	13000	4600	B7.00/20	DB7.00/20	Her JXB	6-3⅝x4¼	WG T9	U 4	No	Wis 4916L	2F	R	Opt	Opt	8x3x⅛	T
102		410A	3	1695	160	194	15000	5400	B7.50/20	DB7.50/20	Her WXC	6-4x4½	Co RU84C	U 4	No	Cla B642	SF	H	Opt	Opt	6½x3x¼	P
103		410B	3	2135	200	212	15000	6200	B7.50/20	DB7.50/20	Her WXC	6-4x4½	Co RU84C	U 4	No	Cla B642	SF	H	Opt	Opt	6½x3x¼	P
104		(N) 506A	3	2950	174	240	17500	6600	B8.25/20	DB8.25/20	Her WXC3	6-4¼x4¼	Co RU5C	U 5	No	Wis 69317 BL	2F	H	Opt	Opt	6½x3x¼	P
105		(cont'd) 375	3	1645	155	179	15000	5000	B7.50/20	DB7.50/20	Her JXC	6-3¾x4¼	Cla R103	U 5	No	Wis 4916L	2F	R	Opt	Opt	8x3x⅛	T

TRUCK SPECIFICATIONS TABLE

FOR MEANING OF ABBREVIATIONS AND EXPLANATION OF REFERENCE MARKS SEE PAGE 52

Line Number	ENGINE DETAILS: Piston Displacement	Compression Ratio	Torque lb. ft.	N.A.C.C. Rated H.P.	Max. Brake H.P. at R.P.M. Given	Valve Arrangement	Camshaft Drive	Piston Material	MAIN BEARINGS: Number and Diameter	MAIN BEARINGS: Length	Oiling System Type	Governor Make	FUEL SYST.: Carburetors Make	FUEL SYST.: Fuel Feed	ELECTRICAL: Ignition System Make	ELECTRICAL: Generator, Starter Make	Clutch Type and Make	Radiator Make	Universals Make	FRONT AXLE: Make and Model	Steering Gear Make	BRAKES: SERVICE: Make, Location Type, Operation	BRAKES: SERVICE: Lining Area	BRAKES: SERVICE: Drum Material	Hand Type, Location	BODY MOUNTING DATA: Cab to Rear of Frame	BODY MOUNTING DATA: Cab to Rear Axle	BODY MOUNTING DATA: Width of Frame	SPRINGS: Front	SPRINGS: Rear	SPRINGS: Auxiliary Type
1	468	4.4	322	43.3	120-2200	H	C	A	4-2¾	10¾	CC	Ha	Zen	V	DR	DR	P.BL	Lo	Spi	Tim 27451	Ros	O4IA	720	A	CD	172	102	33½	42x3	56x4	½
2	707	4.4	500	60.	175-2200	H	C	A	7-3¼	14⅞	CC	Ha	Zen	M	DR	DR	dpLo	Lo	Spi	Tim 27451	Ros	O4IA	720	A	CD	172	102	33½	42x3	56x4	½
3	707	4.4	500	60.	175-2200	H	C	A	7-3¼	14⅞	CC	Ha	Zen	M	DR	DR	dpLo	Lo	Spi	Tim 27451	Ros	O4IA	816	A	CD	172	102	33½	42x3	56x4	½
4	248	5.0	150	27.3	65-2600	L	G	C	7-2⅝	10⅝	PC	No	Zen	M	DR	DR	P.BB	Yo	Spi	Tim	Ros	L4IH	380	G	TX	129½	Opt	31½	40x2½	50x3	½
5	298	4.7	192	33.7	66-2200	L	G	C	7-2⅝	13¼	PC	Mo	Zen	M	AL	AL	D.BB	Yo	Spi	Tim	Ros	L4IHV	452	G	TX	129½	Opt	31½	40x2½	50x3	½
6	339	4.7	225	38.4	73-2200	L	G	C	7-2⅝	13¼	PC	Mo	Zen	M	AL	AL	D.Fu	Yo	Spi	Tim	Ros	L4IHV	578	G	TX	106	Opt	31½	40x2½	62⅝x2½	N
7	339	4.7	225	38.4	73-2200	L	G	C	7-2⅝	13¼	PC	Mo	Zen	M	AL	AL	D.Fu	Yo	Spi	Tim	Ros	L4IHV	658	G	TX	118	Opt	31½	40x2½	62⅝x2½	N
8	360	4.7	238	40.3	80-2200	L	G	C	7-2⅝	13¼	PC	Mo	Zen	M	AL	AL	D.Fu	Yo	Spi	Shu	Ros	L4IHV	768	G	TX	106	Opt	31½	41x2½	62⅝x2½	N
9	428	4.7	280	46.	93-2200	L	G	C	7-3	15	PC	Mo	Zen	M	AL	AL	D.Fu	Yo	Spi	Shu	Ros	L4IHV	893	G	TX	118	Opt	31½	41x2½	62⅝x3	N
10	478	4.4	318	51.2	103-2200	L	G	C	7-3	15	PC	Mo	Zen	M	AL	AL	D.Fu	Yo	Spi	Tim	Ros	L4IHV	658	G	TX	92	Opt	31½	41x2½	62⅝x3	N
11	314	5.2	213	33.7	75-2400	L	G	C	7-3	12⅝	FP	No	Str	M	DR	DR	P.BL	GO	Spi	Tim 31000	Ros	LO4ID	450	e	2I	124¼	72⅝	34	40x2½	54x3	½
12	314	5.2	213	33.7	75-2400	L	G	C	7-3	12⅝	FP	No	Str	M	DR	DR	dpLo	GO	Spi	Tim 31000	Ros	LO4ID	450	e	2I	124¼	72⅝	34	40x2½	54x3	½
13	314	5.2	213	33.7	75-2400	L	G	C	7-3	12⅝	FP	Ow	Str	M	DR	DR	dpLo	GO	Spi	Tim 31000	Ros	LO4ID	450	e	2I	124¼	72⅝	34½	40x2½	54x3	½
14	358	5.2	240	38.4	84-2500	L	G	C	7-3	12⅝	FP	Ow	Str	M	DR	DR	dpLo	GO	Spi	Tim 33000	Ros	LO4IDV	450	e	2I	115¼	63⅝	34½	40x2½	54x3	½
15	358	5.2	240	38.4	84-2500	L	G	C	7-3	12⅝	FP	Ow	Str	M	DR	DR	dpLo	GO	Spi	Tim 33000	Ros	LO4IDV	450	e	2I	115¼	63⅝	34½	40x2½	54x3	½
16	358	5.2	240	38.4	84-2500	L	G	C	7-3	12⅝	FP	Ow	Str	M	DR	DR	dpLo	GO	Spi	Tim 33000	Ros	LO4IDV	574	e	2I	115¼	63⅝	34½	42½x3	54x3	½
17	358	5.2	240	38.4	84-2500	L	G	C	7-3	12⅝	FP	Ow	Str	M	DR	DR	dpLo	GO	Spi	Tim 35000	Ros	LO4IDV	519	e	2I	115¼	63⅝	34½	42½x3	54x3	½
18	358	5.2	240	38.4	84-2500	L	G	C	7-3	12⅝	FP	Ow	Str	M	DR	DR	dpLo	GO	Spi	Tim 35000	Ros	LO4IDV	519	e	2I	115¼	63⅝	34½	42½x3	54x3	½
19	404	5.1	271	43.4	94-2500	L	G	C	7-3	14½	FP	Ow	Str	M	DR	DR	dpLo	GO	Spi	Tim 35000	Ros	LO4IDV	519	e	FD	174⅜	104½	34½	40x2½	54x3	½
20	404	5.1	271	43.4	94-2500	L	G	C	7-3	14½	FP	Ow	Str	M	DR	DR	dpLo	GO	Spi	Tim 35000	Ros	LO4IDV	519	e	FD	110	62	34½	40x2½	54x3	½
21	404	5.1	271	43.4	94-2500	L	G	C	7-3	14½	FP	Ow	Str	M	DR	DR	dpLo	GO	Spi	Tim 35000	Ros	LO4IDV	519	e	FD	174⅜	104½	34½	40x2½	54x3	½
22	453	5.1	309	48.6	101-2400	L	G	C	7-3	14½	FP	Ow	Str	M	DR	DR	dpLo	GO	Spi	Tim 35000	Ros	LO4IDV	519	e	FD	110	62	34½	40x2½	54x3	½
23	404	5.1	271	43.4	94-2500	L	G	C	7-3	14½	FP	Ow	Str	M	DR	DR	dpLo	GO	Spi	Tim 26450	Ros	LO4IDV	544	e	FD	122½	74½	34½	42½x3	54⅝x4	½
24	453	5.1	309	48.6	101-2400	L	G	C	7-3	14½	FP	Ow	Str	M	DR	DR	dpLo	GO	Spi	Tim 26450	Ros	LO4IDV	544	e	FD	122½	74½	34½	42½x3	54⅝x4	½
25	453	5.1	309	48.6	101-2400	L	G	C	7-3	14½	FP	Ow	Str	M	DR	DR	dpLo	GO	Spi	Tim 27450	Ros	LO4IDV	664	e	FD	121¾	73¾	34½	42½x3	54⅝x4	½
26	453	5.1	309	48.6	101-2400	L	G	C	7-3	14½	FP	Ow	Str	M	DR	DR	dpLo	GO	Spi	Own SCH	Ros	O2IMV	502	e	FD	88½	158⅞	34½	42½x3	55x4	½
27	453	5.1	309	48.6	101-2400	L	G	C	7-3	14½	FP	Ow	Str	M	DR	DR	dpLo	GO	Spi	Tim 26450	Ros	BO4IMV	670	e	FD	119½	210	34½	42½x3	54⅝x4	½
28	677	4.6	462	60.0	126-1800	L	G	A	4-3½	11⅜	PC	Wa	Str	M	DR	DR	dpBL	GO	Spi	Tim 27450	Ros	LO4IDV	664	e	FD	122⅝	74⅝	34½	42½x3	54⅝x4	½
29	453	5.1	309	48.6	101-2400	L	G	C	7-3	14½	FP	Ow	Str	M	DR	DR	dpLo	GO	Spi	Tim 26450	Ros	O4IA	544	e	FD	175½	105	34½	42½x3	54⅝x4	½
30	453	5.1	309	48.6	101-2400	L	G	C	7-3	14½	FP	Ow	Str	M	DR	DR	dpLo	GO	Spi	Tim 26450	Ros	O4IA	544	e	FD	223	104¾	34½	42½x3	54⅝x4	½
31	677	4.6	462	60.0	126-1800	L	G	A	4-3½	11⅜	PC	Wa	Str	M	DR	DR	dpBL	GO	Spi	Tim 27450	Ros	O4IA	544	e	FD	175½	105⅝	34½	42½x3	54⅝x4	½
32	780	4.7	475	66.1	156-1800	L	G	A	7-3	16½	FP	St	Ze2	M	NE	LN	dpBL	GO	Spi	Tim 27450	Ros	Ws4IA	664	e	FD	114¾	84	34½	42½x3	54⅝x4	½
33	358	5.2	240	38.4	84-2500	L	G	C	7-3	12⅝	FP	Ow	Str	M	DR	DR	dpLo	GO	Spi	Tim 35000	Ros	LO4IDV	450	e	2I	112	64½	34	41x2¼	53x3	½
34	404	5.1	271	43.4	94-2500	L	G	C	7-3	14½	FP	Ow	Str	M	DR	DR	dpLo	GO	Spi	Tim 26450	Ros	LO4IDV	544	e	FD	124	71¼	34	41½x3	53x3	½
35	404	5.1	271	43.4	94-2500	L	G	C	7-3	14½	FP	Ow	Str	M	DR	DR	dpLo	GO	Spi	Tim 27450	Ros	LO4IDV	544	e	FD	121¼	73½	34	41x3	53½x4	½
36	453	5.1	309	48.6	101-2400	L	G	C	7-3	14½	FP	Ow	Str	M	DR	DR	dpLo	GO	Spi	Tim 27450	Ros	LO4IDV	660	e	FD	121¼	73¼	34	41x3	53½x4	½
37	453	5.1	309	48.6	101-2400	L	G	C	7-3	14½	FP	Ow	Str	M	DR	DR	dpLo	GO	Spi	Tim 27450	Ros	LO4IDV	660	e	FD	104	73¼	34	41x3	53½x4	½
38	214	4.9	142	27.3	72-3200	L	C	A	4-2¾	6½	CC	No	Zen	M	AL	AL	P.BB	GO	Spi	Col 4006	Ros	B4IM	248	G	TX	111	65	34	37x2¼	52x2½	½
39	248	4.9	160	27.3	70-3200	L	C	C	7-2⅜	10⅛	CC	No	Zen	M	AL	AL	P.BB	GO	Spi	Col 5500A8	Ros	L4IH	353	G	CD	111	65	34	37x2¼	52x2½	½
40	248	...	170	27.3	80-3200	L	C	C	7-2⅜	10⅛	CC	No	Zen	M	AL	AL	P.BB	GO	Spi	Col	Ros	L4IH	353	G	CD	141	84	34	37x2¼	52x2½	½
41	311	4.2	196	38.4	73-2400	H	C	N	7-2¾	13⅛	CC	No	Zen	M	AL	AL	D.BL	GO	Spi	Col 5500A7	Ros	L4IH	353	G	CD	108	69	34	40x2½	54x3	½
42	311	4.2	196	38.4	73-2400	H	C	N	7-2¾	13⅛	CC	KP	Zen	M	AL	AL	D.BL	GO	Spi	Col 5500A7	Ros	L4IHV	386	G	CD	108	69	34	40x2½	54x3	½
43	288	4.7	180	32.6	73-2700	L	G	N	7-2⅝	11⅞	FP	KP	Zen	M	AL	AL	D.BL	GO	Spi	Shu 5582B	Ros	L4IHV	386	G	CD	168	101	34	40x2½	54x3	½
44	311	4.2	196	38.4	73-2400	H	C	N	7-2¾	13⅛	CC	KP	Zen	M	AL	AL	D.BL	GO	Spi	Shu 15582B	Ros	L4IHV	380	G	CD	142	83	34	40x2½	54x3	½
45	360	...	240	40.8	90-2500	L	G	N	7-2⅝	13	CC	KP	Zen	M	AL	AL	P.BB	GO	Spi	Shu 15582B	Ros	L4IH	380	G	CD	168	101	34	40x2½	54x3	½
46	381	4.4	236	40.8	89-2500	H	C	N	7-2¾	13⅛	FP	KP	Zen	M	AL	AL	D.BL	GO	Spi	Shu 15582B	Ros	L4IHV	546	G	CD	142	83	34	40x2½	54x3	½
47	427	4.2	268	45.9	100-2400	H	C	N	7-2¾	13⅛	FP	KP	Zen	M	AL	AL	D.BL	GO	Spi	Shu 15692B	Ros	L4IHV	546	G	CD	142	83	34	40x2½	54x3	½
48	381	4.4	236	40.8	89-2500	H	C	N	7-2¾	13⅛	FP	KP	Zen	M	AL	AL	D.BL	GO	Spi	Shu 15692B	Ros	L4IHV	546	G	CD	142	83	34½	40x2½	54x3	½
49	427	4.2	268	45.9	100-2400	H	C	N	7-2¾	13⅛	FP	KP	Zen	M	AL	AL	D.BL	GO	Spi	Shu 15692B	Ros	L4IHV	546	G	CD	142	83	34½	40x2½	54x3	½
50	501	4.3	337	48.2	120-2200	H	C	A	7-2¾	13⅛	CC	KP	Zen	M	AL	AL	D.Fu	GO	Spi	Shu 15692B	Ros	L4IHV	546	G	CD	210	125	34½	40x2½	54x3	½
51	206	5.2	146	26.3	56-2750	H	G	C	3-2½	5⅛	PG	No	Car	M	DR	DR	P.Ow	Ha	Own	Own	Own	O4IM	129	p	4I	...	27⅛	...	36x1¾	54x1¾	N
52	206	5.2	146	26.3	56-2750	H	G	C	3-2½	5⅛	PG	No	Car	M	DR	DR	P.Ow	Ha	Own	Own	Own	O4IM	246	p	2I	85½	50¼	37	36x1¾	45x2½	N
53	206	5.2	146	26.3	56-2750	H	G	C	2-2½	5⅛	PG	No	Car	M	DR	DR	P.Ow	Ha	Own	Own	Own	O4IM	246	p	2I	111⅛	76¼	37	36x1¾	45x2½	N
54	222	4.9	147	27.3	61-2800	L	G	C	4-2⅜	6⅛	FP	No	Zen	M	DR	DR	D.BL	Ch	Spi	Tim 30000H	Ros	L4IH	169	p	TX	Opt	70	33½	41½x2½	54x3	N
55	294	4.5	199	31.5	79-2700	L	G	C	4-2⅜	7	FP	Wa	Zen	M	DR	DR	D.BL	Ch	Spi	Tim 31000H	Ros	L4IH	281	e	TX	Opt	73	33½	41½x2½	54x3	N
56	381	4.4	242	40.8	85-2500	L	G	C	7-2⅝	12½	FP	Wa	Zen	M	DR	DR	D.BL	Ch	Spi	Tim 31000H	Ros	L4IH	328	e	TX	Opt	85	33½	41½x2½	54x3	N
57	381	4.4	242	40.8	85-2500	L	G	C	7-2⅝	12½	FP	Wa	Zen	M	DR	DR	D.BL	Ch	Spi	Tim 33020H	Ros	L4IHV	394	e	TX	Opt	97	33½	41½x2½	56x3	N
58	462	4.5	300	45.9	102-2400	L	G	C	7-3	13⅞	FP	Wa	Str	M	AL	AL	D.BL	Ch	Spi	Tim 26450	Ros	L2IH	311	e	TD	Opt	55	34	44½x2½	56x3	N
59	393	4.9	260	42.0	103-2600	L	G	C	7-3	11½	FP	Ha	Zen	P	DR	DR	D.Fu	Pe	Spi	Wis CF15	Ros	W2/4IM	476	P	TD	108	78	30	48x3	48x3	C
60	428	4.7	280	45.9	107-2600	L	G	C	7-3	11½	FP	Ha	Zen	P	DR	DR	D.Fu	Pe	Spi	Wis CF25	Ros	W2/4IM	476	P	TD	144	89	30	48x3	48x3	C
61	468	4.8	295	43.4	108-2200	L	G	C	7-3	11½	FP	Ha	Zen	P	DR	DR	D.Fu	Pe	Spi	Wis CF30	Ros	W2/4IM	476	P	TD	144	89	30	48x3	48x3	C
62	525	4.9	336	48.2	114-2200	L	G	C	7-3	11½	FP	Ha	Zen	P	DR	DR	D.Fu	Pe	Spi	Wis CF30	Ros	W2/4IM	476	P	TD	144	89	30	48x3	48x3	C
63	525	4.9	336	48.2	114-2200	L	G	C	7-3	11½	FP	Ha	Zen	P	DR	DR	D.Fu	Pe	Spi	Wis CF122	Ros	W2/4IM	530	G	TD	168	105	30	48x3½	52x3½	C
64	638	4.3	410	54.1	126-1850	L	G	C	4-3	10⅛	FP	Bu	Str	P	DR	DR	D.Fu	Pe	Spi	Wis CF122	Ros	W2/4IM	530	G	TD	168	105	30	48x3½	52x3½	C
65	779	4.3	475	66.1	170-1800	L	G	A	7-3	13¼	FP	St	Zen	P	NE	NE	dpBL	Pe	Spi	Wis CF122	Ros	O2/4IA	530	G	TD	Opt	105	30	48x3½	52x3½	C
66	200	4.7	125	24.0	49-2800	L	C	A	3-2⅛	5⅞	FP	No	Zen	M	DR	DR	P.BB	Pe	Spi	Own 8F	Ros	L4IH	268	p	TX	96	53	34	38x2¼	50x2½	N
67	214	4.9	142	27.3	72-3200	L	C	A	4-2⅜	6¾	FP	No	Zen	M	DR	DR	P.BB	Pe	Spi	Own 8F	Ros	L4IH	268	p	TX	96	55	34	38x2¼	50x2½	N
68	214	4.9	142	27.3	72-3200	L	C	A	4-2⅜	6¾	FP	No	Zen	M	DR	DR	P.BL	Pe	Spi	Tim 30020H	Ros	L4IH	287	p	TX	Opt	Opt	34	38x2¼	50x2½	
69	248	5.0	150	27.3	70-3200	L	C	C	7-2⅜	10⅛	FP	No	Zen	M	DR	DR	P.BL	Pe	Spi	Tim 31000H	Ros	L4IH	327	a	TX	Opt	Opt	34	38x2¼	54x3	
70	318	4.6	200	36.0	80-2700	L	C	C	7-2⅝	11¼	FP	No	Zen	M	DR	DR	P.BL	Pe	Spi	Tim 33000H	Ros	L4IH	345	a	TX	134	82	34	40x2½	54x3	
71	318	4.6	200	36.0	80-2700	L	C	C	7-2⅝	11¼	FP	No	Zen	M	DR	DR	P.BL	Pe	Spi	Tim 33000H	Ros	L4IH	345	a	TX	134	82	34	40x2½	54x3	
72	318	4.5	200	36.0	80-2700	L	C	C	7-2⅝	11¼	FP	No	Zen	M	DR	DR	P.BL	Pe	Spi	Tim 33000H	Ros	L4IH	660	a	TD	144	88	34	40x2½	54x3	
73	318	4.5	200	36.0	80-2700	L	C	C	7-2⅝	11¼	FP	No	Zen	M	DR	DR	P.BL	Pe	Spi	Tim 33000H	Ros	L4IH	660	a	TD	144	97	34	40x2½	54x3	
74	360	4.4	240	40.8	90-2500	L	C	C	7-2⅝	11¼	FP	No	Zen	M	DR	DR	D.BL	Pe	Spi	Tim 35000H	Ros	L4IHV	768	a	TD	132	92	34	40x2½	54x3	
75	383	4.5	236	43.3	95-2500	L	C	C	7-2⅝	11¼	FP	No	Zen	M	DR	DR	D.BL	Pe	Spi	Tim 26450H	Ros	T4IHV	876	a	TD	162	109	34	46x3	60x3½	
76	427	4.2	268	45.9	112-2400	H	C	C	7-2⅜	11¼	FP	No	Zen	M	DR	DR	D.BL	Pe	Spi	Tim27450TW	Ros	T4IA	921	a	TD	162	109	34	46x3	56x4	
77	248	5.0	150	27.3	70-3200	L	C	C	7-2⅜	10⅛	FP	No	Zen	M	DR	DR	P.BL	Pe	Spi	Tim 30020H	Ros	L4IHV	380	p	TX	(3)	(3)	34	38x2¼	50x2½	
78	318	4.6	200	36.0	80-2700	L	C	C	7-2⅝	11¼	FP	No	Zen	M	DR	DR	P.BL	Pe	Spi	Tim 31000H	Ros	L4IHV	452	a	TX	(3)	(3)	34	38x2¼	54x3	
79	360	4.4	240	40.8	90-2500	L	C	C	7-2⅝	11¼	FP	No	Zen	M	DR	DR	P.BL	Pe	Spi	Tim 33000H	Ros	L4IHV	578	a	TD	(3)	(3)	34	40x2½	54x3	
80	383	4.5	236	43.3	95-2500	H	C	C	7-2⅝	11¼	FP	No	Zen	M	DR	DR	P.BL	Pe	Spi	Tim 33000H	Ros	L4IHV	660	a	TD	(3)	(3)	34	40x2½	54x3	
81	500	4.2	318	48.6	121-2400	H	C	A	7-2¾	13⅛	FP	No	Zen	M	DR	DR	D.BL	Pe	Spi	Tim 35000A	Ros	L4IHV	768	a	TD	(3)	(3)	34	40x2½	54x3	
82	611	4.5	384	54.1	127-2300	L	G	A	7-3	13¼	FP	No	Zen	M	DR	DR	dpBL	Pe	Spi	Tim 26450W	Ros	Ws4IA	921	a	TD	(3)	(3)	34	46x3	60x3½	
83	260	4.4	152	29.4	65-2400	L	G	A	7-2⅜	13¼	PC	Ha	Zen	M	DR	DR	D.Fu	Ch	Spi	Tim 30000	Ros	L4IH	380	a	TX	144	60	34	38x2¼	52x2½	
84	298	4.4	190	33.7	69-2400	L	G	A	7-2⅜	13¼	PC	Ha	Zen	M	DR	DR	D.Fu	Ch	Spi	Tim 31000	Ros	L4IH	452	a	TX	156	66	34	38x2½	54½x3	
85	360	4.5	212	40.3	82-2400	L	G	A	7-2⅜	13¼	PC	Ha	Zen	M	DR	DR	D.Fu	Ch	Spi	Tim 31000	Ros	L4IH	260	a	TX	156	66	34	38x2½	54½x3	
86	384	4.5	264	43.3	92-2400	L	G	A	7-2⅜	13¼	PC	Ha	Zen	M	DR	DR	D.Fu	Ch	Spi	Tim 33000	Ros	L4IH	394	a	CD	168	72	34	38x2½	54½x3	
87	453	4.5	300	48.6	98-2200	L	G	A	7-3	13¼	PC	Ha	Zen	M	DR	DR	D.Fu	Ch	Spi	Tim 35000	Ros	L4IH	768	a	CD	192	84	34	45x3	54½x3	
88	529	4.7	350	51.3	114-2200	L	G	A	7-3	14	PC	Ha	Zen	M	DR	DR	D.Fu	Ch	Spi	Tim 27450	Ros	L4IH	921	a	CD	216	72	34	46x3	52x4	
89	707	4.5	450	60.	150-2000	L	G	A	7-3½	12½	PC	Ha	Zen	M	DR	DR	P.BL	Ch	Spi	Tim 27450	Ros	W4A	921	a	CD	108	33	34	46x3	52x4	
90	707	4.5	450	60.	150-2000	L	G	A	7-3½	15¼	PC	Ha	Zen	M	DR	DR	P.BL	Ch	Spi	Tim 27450	Ros	W4A	921	a	CD	108	33	34	46x3	None	
91	384	4.5	262	43.3	90-2200	L	G	A	7-3½	15¼	PC	Ha	Zen	M	DR	DR	D.Fu	Ch	Spi	Wis F211	Ros	L2IH	433	a	CD	168	72	34	45x3	54½x3	
92	529	4.5	350	51.3	114-2000	L	G	A	7-3	14	PC	Ha	Zen	M	DR	DR	P.Fu	Ch	Spi	Wis F311	Ros	L2IH	542	a	CD	192	84	34	45x3	54½x3	
93	228	4.7	148	27.3	63-2800	L	G	C	7-2½	10⅜	PC	No	Zen	M	AL	AL	P.BB	GO	Spi	Cla F212A	Ros	L4IH	218	a	TX	93	51½	34	42x2	50x2½	
94	228	4.7	148	27.3	63-2800	L	G	C	7-2½	10⅜	PC	No	Zen	M	AL	AL	P.BB	GO	Spi	Cla F212A	Ros	L4IH	218	a	TX	93	51½	34	42x2	50x2½	
95	228	4.7	148	27.3	63-2800	L	G	C	7-2½	10⅜	PC	No	Zen	M	AL	AL	P.BB	GO	Spi	Cla F212A	Ros	L4IH	245	a	TX	93	51½	34	42x2	50x2½	
96	228	4.7	148	27.3	63-2800	L	G	C	7-2½	10⅜	PC	No	Zen	M	AL	AL	P.BB	GO	Spi	Cla F212A	Ros	L4IH	246	a	TX	96	54	34	42x2½	53x2½	
97	263	5.4	164	31.5	68-2800	L	G	A	7-2½	10⅜	PC	No	Zen	M	AL	AL	P.BB.	GO	Spi	Cla F308	Ros	L4IH	350	a	TX	126	72	34	42x2½	53x2½	
98	228	4.7	148	27.3	63-2800	L	G	C	7-2½	10⅜	PC	No	Zen	M	AL	AL	P.BB	GO	Spi	Cla F212A	Ros	L4IH	350	a	TX	126	72	34	42x2½	53x2½	
99	282	5.35	176	33.7	73-2800	L	G	A	7-2½	10⅜	PC	No	Zen	M	AL	AL	P.BB	GO	Spi	Cla F308	Ros	L4IH	350	a	TD	126	72	34	42x2½	53x2½	
100	263	5.4	164	31.5	68-2800	L	G	A	7-2½	10⅜	PC	No	Zen	M	AL	AL	P.BB	GO	Spi	Cla F308	Ros	L4IH	350	a	TD	126	72	34	42x2½	53x2½	
101	263	5.4	164	31.5	68-2800	L	G	A	7-2½	10⅜	PC	No	Zen	M	AL	AL	P.BB	GO	Spi	Cla F308	Ros	L4IH	350	a	TD	126	72	34	42x2½	53x2½	
102	339	5 0	232	38.4	103-2800	L	G	A	7-2⅝	13¼	PC	Ha	Zen	M	AL	AL	P.BB.	GO	Spi	Cla F308	Ros	L4IHV	350	a	TD	117	74⅜	34	45¼x2½	56x3	
103	339	5.0	232	38.4	103-2800	L	G	A	7-2⅝	13¼	PC	Ha	Zen	M	LN	LN	P.BB	GO	Spi	Cla F308	Ros	L4IHV	350	a	TD	Opt	113¾	34	45¼x2½	56x3	
104	384	5 05	258	41.3	107-2800	L	G	C	7-2⅝	13¼	PC	Ha	Zen	M	LN	LN	D.Co	GO	Spi	Shu 5582B	Ros	L4IHV	410	pa	TD	138	87⅝	34	45¼x2½	56x3	
105	282	5.3	176	33.7	73-2800	L	G	A	7-2½	10⅜	PC	Ha	Zen	M	AL	AL	P.BB	GO	Spi	Cla F308	Ros	L4IH	350	a	TD	126	72	34	42x2½	53x2½	

Line Number	MAKE AND MODEL	GENERAL (See Keynote) Tonnage Rating	Chassis Price	Standard Wheelbase	Max. W. B. Furnished	Gross Vehicle Weight	Chassis Wt. (Stripped)	TIRE SIZE Front	Rear	MAJOR UNITS. ENGINE Make and Model	No. of Cylinders Bore and Stroke	TRANSMISSION Make and Model	Location and Forward Speeds	Aux. Location and Speeds	REAR AXLE Make and Model	Gear and Type	Drive and Torque	GEAR RATIOS In High	In Low	FRAME Side Rail Dimensions	Type	Line Number
1	Diamond T (N)606B	3–4	3695	179	246	20000	7600	B9.00/20	DB9.00/20	Her RXB	6–4½x5¼	Co RU5C	U 5	No	Wis 1237H	2F	H	Opt	Opt	6½x3x¼	P	1
2	(concluded)	510 4	1995	168	201	18000	6400	B7.00/20	DB8.25/20	Her WXC	6–4x4½	Co RU84C	U 4	No	Tim 58205H	SF	R	Opt	Opt	6½x3x¼	P	2
3		425 4	2295	160	194	18000	6200	B8.25/20	DB8.25/20	Her WXC	6–4x4½	Cla R909	U 5	No	Wis 70000	2F	R	Opt	Opt	6½x3x¼	P	3
4		603 5	3395	169	230	20000	7540	B9.00/20	DB9.00/20	Her YXC	6–4¾x4¾	Co RU5C	U 5	Op	Wis 1237H	2F	R	Opt	Opt	6½x3x¼	P	4
5		525 5	2595	168	201	20000	7200	B9.00/20	DB9.00/20	Her WXC2	6–4¼x4½	Cla R909	U 5	No	Wis 1237H	2F	R	Opt	Opt	6½x3x¼	P	5
6		750 5	4925	178	238	24000	9300	B9.75/22	DB9.75/22	Her RXC	6–4½x5½	Co SA5	A 5	Op	Wis 1737 KW	2F	R	Opt	Opt	7½x3½x¼	P	6
7	Differential	E-131 2½	3200	160	160	18100	5100	B9.00/20	DB9.00/20	Lyc ASD	6–3¾x4½	BL 314	U 4	No	Tim 58200	BF	H	7.8	51.4	12x2½x¼	P	7
8	Dodge Bros.	HC Com'l	340	111	111		1775	B5.25/17	DB5.25/17	Own	6–3½x4½	Own	U 3	No	Own	S½	H	4.37	12.2	5x2x¼		8
9		HLC Com'l	365	119	119		1805	B5.25/17	B5.25/17	Own	6–3½x4½	Own	U 3	No	Own	S½	H	4.37	12.2	5½x2¼x¼	X	9
10		UF-10 ½	375	109	109	4025	1925	B5.00/19	B5.00/19	Own	4–3½x4¾	Own	U 3	No	Own	S½	H	4.66	13.9	5x2½x¼	C	10
11		F-10 ½	445	109	109	4125	1975	B5.25/19	B5.25/19	Own	6–3¼x4¼	Own	U 3	No	Own	S½	H	4.66	13.9	5x2½x¼	C	11
12		UG20 ¾–1	537	131	157	5900	2450	B7.50/17	B7.50/17	Own	4–3½x4¾	Own	U 4	No	Own	SF	H	5.85	36.1	7x2¼x¼	C	12
13		G20 ¾–1	597	131	157	5975	2520	B7.50/17	B7.50/17	Own	6–3½x4½	Own	U 4	No	Own	SF	H	5.85	36.1	7x2¼x¼	C	13
14		1–1½	495	133	133	5840	2590	P6.00/20	P32x6	Own	4–3½x4¼	Own	U 4	No	Own	S½	H	5.6	36.1	6x2¾x½	C	14
15		1–1½	595	133	133	5940	2690	P6.00/20	P32x6	Own	6–3½x3¼	Own	U 4	No	Own	S½	H	5.1	33.4	6x2¾x½	C	15
16		UG-30 1½–2	525	131	157	8200	2490	B6.00/20	P32x6	Own	4–3½x4¾	Own	U 4	No	Own	SF	H	5.85	36.1	7x2¼x¼	C	16
17		G30 1½–2	585	131	157	8275	2560	B6.00/20	P32x6	Own	6–3½x4¾	Own	U 4	No	Own	SF	H	5.85	36.1	7x2¼x¼	C	17
18		UF-30 1½–2	595	136	165	8225	2581	B6.00/20	P32x6	Own	4–3½x4¾	Own	U 4	No	Own	SF	H	5.67	37.1	7x2⅛x¼	C	18
19		F-30 1½–2	695	136	165	8275	2631	B6.00/20	P32x6	Own	6–3½x4¾	Own	U 4	No	Own	SF	H	5.67	37.1	7x2⅛x¼	C	19
20		F-35 1½–2½	1425	140	165	10175	3780	B6.00/20	DB6.00/20	Own	6–3½x3¾	Own	U 4	No	Own	SF	H	6.38	41.4	7¼x2¼x¼	C	20
21		G43 2–3	795	136	165	10500	3345	B7.00/20	DB7.00/20	Own	6–3¼x4¾	Own	U 5	No	Own	SF	H	6.37	50.9	8¼x2¼x¼	C	21
22		F-40 2–3½	1995	150	190	14590	5173	B6.50/20	DB6.50/20	Own	6–3½x5	Own	U 4	No	Own	SF	H	6.38	43.7	9½x3¼x¼	C	22
23		3–4	1515	135	185	12250	4235	P32x6	DP32x6	Own	6–3½x4½	Own	U 4	No	Own	S½	H	7.13	46.3	7x2⅛x¼	C	23
24		(5) F-61 3–5½	2575	170	195	19429	5789	P32x6	DP32x6	Own	6–3½x5	Own	U 4	No	Own	SF	H	7.12	48.8	10x3¼x¼	C	24
25		(5) G-82 4–7½	5350	195	220	25000	8040	B9.75/20	DB9.75/20	Own	8–3½x5	Own	U 5	No	Own	SF	H	7.71	69.6	10¼x3¼x¼	C	25
26	Fageol	101 1½–2½	850	143	167	10000	3700	B6.00/20	DB6.00/20	Wau XAK	4–3¼x4¾	WG T9	U 4	No	Tim 53600H	BF½	H	5.14	32.9	5½x3¼x¼	C	26
27		106 1½–2½	1600	161	173	11200	3975	B7.00/20	DB7.00/20	Wau TS	6–3½x4¾	WG T9	U 4	No	Tim 53200H	BF	H	5.66	36.2	5½x3¼x¼	C	27
28		135 2–3	1850	161	177	13400	5150	B7.50/20	DB7.00/20	Wau TL	6–3½x4¾	WG T9	U 4	No	Tim 54200H	BF	H	5.83	37.3	5½x3¼x¼	C	28
29		250 2½–4	2450	178	196	16300	5750	B8.25/20	DB8.25/20	Wau MK	6–4¼x4¾	BL 314	U 4	No	Tim 56200H	BF	H	6.16	40.6	8x3x¼		29
30		300 3–5	3100	178	196	19500	6500	B9.00/20	DB9.00/20	Wau MK	6–4½x4¾	BL 314	U 4	No	Tim 58200H	BF	R	6.83	45.1	8x3x¼	T	30
31		370 5–7	4600	182	200	25300	8080	B9.75/20	DB9.75/20	Wau SRK	6–4¾x5½	BL 554	U 4	A 3	Tim 65706	WF	R	5.69	139.	7¼x3½x¼	C	31
32	Federal	DM	900	120	120	8000	3050	B6.00/20	P32x6	Con W10	4–3¾x4¼	WG T9	U 4	No	Cla B374	SF	H	5.67	38.2	6x2¾x¼	D	32
33		D4 1½	670	130	190	10000	3225	B6.00/20	P32x6	Con W10	4–3½x4¼	WG T9	U 4	No	Cla B374	SF	H	6.38	40.8	6x2¾x¼	C	33
34		E4 1½	695	130	190	10000	3225	B6.00/20	P32x6	Con 25A	6–3½x4	WG T9	U 4	No	Cla B374	SF	H	6.38	40.8	6x2¾x¼	C	34
35		G5L 2	995	132	188	11500	3750	B6.50/20	DB6.50/20	Con 25A	6–3¾x4	WG T9	U 4	No	Tim 54200H	SF	H	6.8	43.6	6x2¾x¼	C	35
36		T3W 2½	1595	148	185	14000	5110	P32x6	P36x8	Wau V	4–4x5	Own 7754	A 4	No	Tim 64603H	W½	R	7.25	36.3	6x3½x¼	C	36
37		T3WFA 2½–3	1795	148	185	16000	5400	P32x6	DP32x6	Wau V	4–4x5	Own 7754	A 4	No	Tim 65001H	WF	R	8.75	43.8	6x3½x¼	C	37
38		A7 2½–3	1945	175	237	15000	6050	B8.25/20	DB8.25/20	Wau 6MS	6–3¼x4¾	Cla R100	A 5	No	Cla B642	SF	H	6.43	45.5	10x3½x¼	T	38
39		A8-A8DR 3½–4	2295	175	237	18000	6550	B9.00/20	DB9.00/20	Wau 6MK	6–4¼x4¾	Cla R900	A 5	No	Tim 58200H	SF	H	6.83	55.5	10x3¼x¼	T	39
40		T10B 3½–4	2550	165	230	19000	6645	P34x7	DP34x7	Con 18R	6–4x4½	Own 7784	A 4	No	Tim 58200H	BF	R	6.83	44.5	7½x3½x¼	C	40
41		T10DR-T10W 3½–4	2685	165	230	19000	6645	P34x7	DP34x7	Con 18R	6–4x4½	Own 7784	A 4	No	Tim 65200H	w/2F	R	6.75	44.0	7½x3½x¼	C	41
42		A600 2½–3	1745	157	206	15000	5050	B7.50/20	DB7.50/20	Con E600	6–3⅛x4½	Own 7784	A 4	No	Cla B610	SF	H	6.38	38.5	6x3½x¼	C	42
43		A600T 3–3½	2045	157	206	17000	6100	B8.25/20	DB8.25/20	Con E601	6–3½x4½	Own 7784	A 4	No	Tim 58000H	SF	H	7.8	50.8	6x3½x¼	P	43
44		A600TDR-A600TW 3–3½	2180	157	206	17000	6100	B8.25/20	DB8.25/20	Con E601	6–3¾x4½	Own 7784	A 4	No	Tim 65001H	w/2F	H	7.5	48.9	6x3½x¼	P	44
45		U6-U6DR 4½–5	3860	165	230	22000	7420	P36x8	DP36x8	Con 20R	6–4½x4¾	Cla B 710	A 5	No	Tim 65706H	w/2F	R	7.75	50.4	7½x3½x¼	C	45
46		C7-C7W 6	4485	195	249	26000	9550	B9.75/20	DB9.75/20	Con 21R	6–4¾x4¾	Cla B 710	A 5	No	Tim 76725H	w/2F	R	7.92	51.5	7¾x3½x¼	P	46
47		C8-C8W 6	4895	195	249	26000	9650	B9.75/20	DB9.75/20	Con 21R	6–4¾x4¾	Cla B 710	A 5	No	Tim 76725W	w/2F	R	7.92	51.5	7¾x3½x¼	P	47
48		X8DR-X8 7½	4335	162	186	30000	9750	S36x6	S40x14	Con B7	4–5x6	Cla B 710	A 5	No	Tim 68700DP	w/2F	R	11 7	76.0	9¼x3½x¼	C	48
49		X8RDR-X8R 7½	4735	162	186	30000	10475	P40x8	DP40x8	Con 21R	6–4¾x4¾	Cla B 710	A 5	No	Tim 68702DP	w/2F	R	11.7	76.0	9¼x3½x¼	C	49
50	Ford Comm.		320	112	112		1688	B5.50/17	B5.50/17	Own	4–3½x4¼	Own	U 3	No	Own	S¾	U	4.1	13.9	6x1¼x.105	C	50
51		Truck 1½	470	131	131		2864	B6.00/20	P32x6	Own	4–3½x4¼	Own	U 4	No	Own	S¾	U	6.6	42.2	7x2¾x¼	C	51
52		Truck 1½	500	157	157		3140	B6.00/20	P32x6	Own	4–3½x4¼	Own	U 4	No	Own	S¾	U	6.6	42.2	7x2¾x¼	C	52
53	FWD	H4 1½–2	3325	120	160	11000	5300	P34x7	P34x7	Wis 8U	4–4x5	Cot A	A 4	Op	Own H	BF	H	7.86	38.0	5½x2¼x¼	C	53
54		(All 4Wh.Dr.) H6 2–2½	3385	133	180	13000	5900	P9.00/20	P9.00/20	Wau MS	6–3¾x4¾	BL 51	U 4	No	Own H	BF	H	8.92	47.7	5½x2¼x¼	C	54
55		HH-6 2½–3	4135	138	170	16000	6900	P9.75/20	P9.75/20	Wau MK	6–4½x4¾	BL 55	A 7	R 2	Own U	BF	H	6.95	84.7	5½x2¼x¼	C	55
56		B 3	4200	124	156	15500	6460	S36x6	S36x6	Own A	4–4¾x5½	Cot DAF	A 3	Op	Own B	BF	H	8.9	35.6	5½x2¼x¼	C	56
57		CU-6 3½–4	4985	147	179	19500	8000	B10.50/20	DB10.50/20	Wau SRS	6–4½x5½	Own U	A 5	Op	Own U	BF	H	8.9	88.6	7x3x	C	57
58		CU6A 3½–4	4685	147	179	19000	7800	B10.50/20	DB10.50/20	Wau SRS	6–4½x5½	BL 615	U 5	Op	Own U	BF	H	6.72	55.2	7x3x	C	58
59		SSU 4–5	5135	147	179	22000	8300	B11.25/20	B11.25/20	Wau SRL	6–4¾x5½	Own U	A 5	Op	Own U	BF	H	8.9	88.6	7x3x	C	59
60		SSUA 4–5	4835	147	179	21500	8100	B11.25/20	B11.25/20	Wau SRL	6–4¾x5½	BL 706	U 5	Op	Own M	BF	H	7.35	73	7x3x	C	60
61		M5 5–7½	7400	165	195	29500	11200	B12.75/20	B12.75/20	Wau SRK	6–4¾x5½	BL 714	U 4	A 2	Wis 131W	2F	H	10.0	207.	8x3x	C	61
62		MF6 5–6	5785	147	179	24500	9100	B10.50/20	DB10.50/20	Wau SRK	6–4¾x5½	Own U	A 5	Op	Own M	BF	H	7.35	73.0	8x3x	C	62
63		(Frt. Wh. Dr.) LBU 5–6	4800	171	Op	23500	9000	B9.00/20	DB9.00/20	Wau SRS	6–4½x5½	BL 55	U 4	Op	Own U	D	H	7.35	39.5	7x3x	C	63
64		M7 7½–10	8500	165	195	37000	12400	P40x10	DP40x10	Wau RB	6–5x5¾	BL 714	U 4	A 2	Wis 131W	2F	H	8.36	173.	10½x3x	C	64
65		(T)72-T 25–30	7000	120	Op	72000	10450	B9.75/20	DB9.75/20	Wau 125	6–4¾x5½	BL 724	U 4	No	Wis 1237	2F	H	8.4	97.1	8x3x¼	C	65
66	General Mot. (6)	T15 ½–1½	645	130	141	6500	2625	B5.50/20	B5.50/20	Own 200	6–3½x3¾	Own	U 3	No	Own	S½	H	4.86	16.1	6x2¼x¼	TL	66
67		T18 1½–2	595	131	157	8200	2785	P30x5	P32x6	Own 200	6–3½x3¾	Own	U 4	No	Own	S½	U	5.43	35.7	6x2¼x½	TL	67
68		T18 1½–2	675	131	157	8500	3130	P30x5	P32x6	Own 221	6–3⅛x4⅝	Own	U 4	No	Own	S½	U	5.43	35.7	7⅛x2⅜x¼	T	68
69		T19 1½–2½	745	130	164	10000	3110	B5.50/20	P32x6	Own 200	6–3½x3¾	Own	U 4	Op	Own	SF	H	6.2	40.7	6x2¼x¼	TL	69
70		T25 1½–2	1200	130	152	9000	3375	B6.00/20	B7.50/20	Buick	6–3⅛x4⅝	Own	U 4	No	Own	S½	H	5.83	29.6	6x2¼x¼		70
71		T23 2–3	745	131	157	10000	3080	B6.50/20	DB6.50/20	Own 200	6–3½x3¾	Own	U 4	Op	Own	SF	H	6.2	40.7	6x2¼x¼	TL	71
72		T23 2–3	795	131	166	10500	3420	B6.50/20	DB6.50/20	Own 221	6–3⅛x4⅝	Own	U 4	Op	Own	SF	H	5.67	37.3	7⅛x2⅜x¼	T	72
73		T26 2–3	1210	130	164	11000	3685	B6.50/20	B8.25/20	Own 257	6–3⅛x4⅝	Own	U 4	No	Own	SF	H	5.67	35.7	6½x2¼x¼	TL	73
74		T30 2–3	1545	141	164	12500	4490	P30x5	DP30x5	Buick	6–3⅛x4⅝	Own	U 4	No	Own	S½	H	5.63	28.6	6½x3x½	TL	74
75		T31 2½–4	1695	141	181	14000	4695	P32x6	DP32x6	Own 257	6–3⅛x4⅝	Own	U 4	No	Own	SF	H	5.63	35.5	6½x3x½	TL	75
76		T33 3–3½	1225	142	184	13000	4415	P32x6	DP32x6	Own 257	6–3⅛x4⅝	Own	U 4	Op	Own	SF	H	5.63	35.5	8x3x¼		76
77		T42 2½–4	1845	141	181	15000	4725	P32x6	DP32x6	Buick	6–3⅛x4⅝	Own	U 4	No	Own	S½	H	6.57	33.4	6½x3x½	TL	77
78		T43 3½–4½	1525	142	184	16000	4935	P32x6	DP32x6	Own 257	6–3⅛x4⅝	Own	U 4	No	Own	SF	H	6.57	41.4	8x3x¼	T	78
79		T44 3–4½	2065	141	181	16000	5095	P34x7	DP34x7	Buick	6–3⅛x4⅝	Own	U 4	No	Own	2½	R	8.05	40.9	9½x3x½	TL	79
80		T45 3–4½	1865	141	181	16000	4910	P32x6	DP32x6	Own 257	6–3⅛x4⅝	Own	U 4	No	Own	SF	R	6.57	41.4	6½x3x½	TL	80
81		T51 4–5½	2480	155	200	19000	6090	P34x7	DP34x7	Own 331	6–3¾x5	Own	U 4	No	Own	SF	R	6.57	40.6	9x3½x½	TL	81
82		T51H 5–6½	2800	154	200	22000	6910	P34x7	DP34x7	Own 331	6–3¾x5	Own	U 4	Op	Own	2F	R	8.50	52.5	9x3½x½	TL	82
83		T60 5–6½	3035	154	200	22000	6925	P34x7	DP34x7	Buick	6–3¾x5	Own	U 4	Op	Own	WF	R	8.50	52.5	9x3½x½	TL	83
84		T61 5–6½	3710	154	200	22000	7380	B9.00/20	DB9.00/20	Own 400	6–4½x5	Own	U 5	Op	Own	WF	R	8.50	69.9	9x3½x½	TL	84
85		T82 5–7	3795	155	201	24000	7500	B9.00/20	DB9.00/20	Own 331	6–3¾x5	Own	U 4	A 3	Own	WF	R	10.2	143	9x3½x½	TL	85
86		T83 5–7½	4205	155	201	25000	7765	B9.00/20	DB9.00/20	Own 400	6–4½x5	Own	U 5	Op	Own	WF	R	9.00	74.0	9x3½x½		86
87		T-84 5–8	4895	171	204	28000	9425	B10.50/20	DB10.50/20	Own 400	6–4½x5	Own	U 4	Op	Own	2F	R	8.5	53.9	9½x4x½	L	87
88		T-84SX 7½	***	201	201	25000	9850	B10.50/20	DB10.50/20	Own 400	6–4½x5	Own	U 4	No	Own	2F	R	10.1	64.2	9½x4x½	L	88
89		T85 6–8	5600	171	204	30000	10630	B9.75/20	DB9.75/20	Own 525	6–4½x5½	Own	U 4	Op	Own	2F	R	8.50	53.3	9½x4x½	L	89
90		T85H 8–9½	6195	171	204	34000	11060	B9.75/20	DB9.75/20	Own 525	6–4½x5½	Own	U 4	Op	Own	2F	R	9.30	58.3	9½x4x½	L	90
91		T110 10–12	8110	171	204	40000	12800	B10.50/24	DB10.50/24	Own 616	6–4½x5½	Own	U 4	A 3	Own	2F	R	9.30	116.	9½x4x½	L	91
92	Gramm	AX4 1–1½	795	131	157	8000	3350	B6.50/20	B6.50/20	Con W10	4–3¾x4¼	WG TA	U 4	No	Tim 53200H	BF	H	5.66	36.3	6x2¾x¼	L	92
93		AX6 1–1½	895	131	157	8000	3550	B6.50/20	B6.50/20	Con 25A	6–3½x4	WG T9	U 4	No	Tim 53200H	BF	H	5.66	36.3	6x2¾x¼	L	93
94		BX4 1½–2	895	131	210	10000	3525	B6.00/20	DB6.00/20	Con W10	4–3⅞x4¼	WG T9	U 4	No	Tim 53200H	BF	H	6.2	39.6	6x2¾x¼	L	94
95		BX6 1½–2	995	131	210	10000	3725	B6.00/20	DB6.00/20	Con 25A	6–3½x4	WG T9	U 4	No	Tim 53200H	BF	H	6.2	39.6	6x2¾x¼	L	95
96		BXF 1½–2	1495	131	210	10000	4000	B6.00/20	DB6.00/20	Lyc A8D	6–3¾x4½	BL 314	U 4	No	Tim 53200	BF	H	5.6	37	6x2¾x¼	L	96
97		B 2–2½	1295	140	196	12000	4150	B6.50/20	DB6.50/20	Lyc 4SL	6–3¼x4½	Co A4J	U 4	No	Tim 54200H	BF	H	5.83	37.1	6x2½x¼	C	97
98		BF 2–3	1695	140	210	12000	4300	B6.50/20	DB6.50/20	Lyc A8D	6–3¾x4½	BL 314	U 4	No	Tim 54200	BF	H	5.8	37.1	6x2¾x¼	L	98
99		CX4 2–3	1095	131	210	12000	3950	B6.50/20	DB6.50/20	C n W20	4–4¼x4¼	WG T9	U 4	No	Tim 54200H	BF	H	5.8	37.0	10x2¾x¼	CB	99
100		CX6 2–3	1295	131	210	12000	4150	B6.50/20	DB6.50/20	Con 16C	6–3¾x4¾	WG T9	U 4	No	Tim 54200H	BF	H	5.8	37.0	10x2¾x¼	BC	100
101		C 2–3	1795	160	224	14000	4820	B7.00/20	DB7.00/20	Lyc A8	6–3½x4½	BL 314	U 4	No	Tim 54200 H	BF	H	5.8	37.1	7x2¼x¼	C	101
102		CXH 2–3	1345	131	210	13400	4300	B6.50/20	DB6.50/20	Her JXC	6–3¾x4¾	BL 234	U 4	No	Tim 54200	BF	H	5.8	37.0	10x2¾x¼	C	102
103		CF 2–3½	1895	160	224	14000	4900	B7.50/20	DB7.50/20	Lyc A8D	6–3¾x4½	BL 314	U 4	No	Tim 54200	BF	H	5.8	37.1	7x2¼x¼	L	103
104		CXF 2–3½	2395	160	224	14000	5100	B7.50/20	DB7.50/20	Con 20R	6–4¼x4¾	BL 554	U 4	No	Tim 54200	BF	H	5.8	41.6	7x2¼x¼	L	104
105		DF 2½–4	1995	160	224	17000	5160	B7.50/20	DB7.50/20	Lyc A8D	6–3¾x4½	BL 314	U 4	No	Tim 56200H	BF	H	6.1	39.0	7x2½x¼	L	105
106		DF 2½–4	2695	160	260	17000	5300	B7.50/20	DB7.50/20	Con 21R	6–4¼x4¾	BL 554	U 4	No	Tim 56200	BF	H	6.1	43.5	7x2½x¼	L	106
107		EX 3–4	2295	160	224	16300	5200	B8.25/20	DB8.25/20	Con E601	6–3¾x4½	BL 324	U 4	No	Tim 56200	BF	H	6.1	43.5	7x2½x¼	L	107
108		E330 3–4½	2595	160	224	20000	5950	B8.25/20	DB8.25/20	Lyc T8	6–3½x5	BL 554	U 4	No	Tim 58200H	BF	H	5.5	35.6	12x2½x¼	L	108
109		ED 3–4½	3995	160	224	20000	6100	B8.25/20	DB8.25/20	Cum Die	4–4¼x6	BL 554	U 4	No	Tim 58200	BF	H	5.5	35.6	12x2½x¼	L	109
110		EY190 3	3595	190	190	16000	6750	B7.50/20	DB7.50/20	Con 20R	6–4¼x4¾	Co Rus4	U 4	No	Tim 58200H	BF	H	4.5	29.1	8¾x3¼x¼		110
111		GY 4	4345	190	210	18000	7700	B8.25/20	DB8.25/20	Con 21R	6–4¼x4¾	Co Rus	U 4	No	Wis 69317H	2F	H	4.3	27.9	8¾x3¼x¼		111
112		G 4–6	3695	150	225	24000	7950	B9.00/20	DB9.00/20	Con 21R	6–4¾x4¾	BL 554	U 4	No	Wis 1237H	2F	H	6.8	49.0	12x2½x¼	L	112
113		GF 4–6	5500	150	225	24000	9050	B9.75/20	B9.75/20	Her HXC	6–5¼x6	BL 744	U 4	No	Wis 1237H	2F	H	4.29	15.8	12x2½x¼	L	113
114		GW 5–7½	5175	157	240	28000	9500	B9.00/20	DB9.00/20	Con 21R	6–4¾x4¾	BL 554	U 4	No	Wis 1627KW	2F	H	6.3	41.0	7½x3½	L	114
115		GWD 5–7½	6495	157	240	30000	10000	B10.50/20	D10.50/20	Cum H Die	6–4¼x6	BL 735	U 5	No	Wis 1737KW	2F	H	5.75	21.2	12x3x¼	L	115
116		HY 5	6595	210	236	22000	10100	B9.00/20	D10.00/20	Con 16H	6–4¼x5¾	Fu HU16	U 4	No	Wis12527KW	2F	H	4.0	25.2	8¾x3¼x¼		116
117	Hug	23 2	1785	146	191	12420	5620	B7.00/20	DB7.00/20	Bud H298	6–3¾x4½	Fu MLU	U 4	No	Cla B611	SF	H	5.66	36.	8x3¼		117
118		42 3	2175	146	201	15700	6500	B8.25/20	DB8.25/20	Bud H298	6–3¾x4½	Fu MLU	U 4	No	Cla B800	SF	H	6.37	40.5	8x3x¼		118
119		418 3	5070	158	158	19620	8500	B9.75/20	B12.75/20	Bud K428	6–4¼x4¾	FuMRUAy	U 4	A 3	Wis 1237H	2F	H	7.95	119	8x3x¼		119
120		42K 3	2393	146	201	16500	7300	B9.00/20	DB9.00/20	Bud K369	6–4¼x4¾	BL 51-5	U 5	No	Cla B800	SF	H	7.12	42.	8x3x¼		120
121		70 3	3435	122	122	19600	7535	B9.75/20	DB9.75/20	Bud K369	6–4¼x4¾	Fu 5A380	U 5	No	Wis 70000Q	2F	H	9.14	64.	6x3x¼		121
122		87K 3½	4300	128	128	22400	7600	B9.75/20	DB9.75/20	Bud K428	6–4¾x4¾	Fu MHOG	A 8	No	Wis 1237Q	2F	H	8.95	79.	7x3½x¼	L	122
123		(cont'd) 43 3½	3380	146	201	22500	7300	B9.75/20	DB9.75/20	Bud K428	6–4¾x4¾	Fu VUOG	U 5	No	Wis 1237H	2F	H	8.95	62.	8x3x¼		123

Line Number	ENGINE DETAILS: Piston Displacement	Compression Ratio	Torque lb. ft.	N.A.C.C. Rated H.P.	Max. Brake H.P. at R.P.M. Given	Valve Arrangement	Camshaft Drive	Piston Material	MAIN BEARINGS: Number and Diameter	MAIN BEARINGS: Length	Oiling System Type	Governor Make	FUEL SYST.: Carburetors Make	FUEL SYST.: Fuel Feed	ELECTRICAL: Ignition System Make	ELECTRICAL: Generator, Starter Make	Clutch Type and Make	Radiator Make	Universals Make	FRONT AXLE: Make and Model	Steering Gear Make	BRAKES: SERVICE: Make, Location Type, Operation	BRAKES: SERVICE: Lining Area	BRAKES: SERVICE: Drum Material	BRAKES: Hand Type, Location	BODY MOUNTING DATA: Cab to Rear of Frame	BODY MOUNTING DATA: Cab to Rear Axle	BODY MOUNTING DATA: Width of Frame	SPRINGS: Front	SPRINGS: Rear	SPRINGS: Auxiliary Type
1	501	4.4	278	48.6	111-2200	L	G	C	7-3	12½	PC	Ha	Zen	M	LN	LN	D.Co	GO	Spi	Shu 5582B	Ros	L4IHV	499	a	TD	138	88	34	45¾x2½	56x3	½
2	339	5.0	232	38.4	103-2800	L	G	A	7-2⅝	13¼	PC	Ha	Zen	M	AL	AL	D.Co	GO	Spi	Shu 5582B	Ros	L4IHV	408	pa	TD	114	71⅛	34	45¼x2½	56x3	½
3	339	5.0	232	38.4	103-2800	L	G	A	7-2⅝	13¼	PC	Ha	Zen	M	AL	AL	P.BB	GO	Spi	Cla F308	Ros	L4IHV	410	a	TD	117	74¾	34	45¼x2½	56x3	½
4	428	4.4	278	45.9	93-2200	L	G	C	7-3	14	PC	Ha	Zen	M	AL	AL	D.Co	GO	Spi	Shu 5582B	Ros	L4IHV	499	a	TD	120	79½	34	45¼x2½	56x3	½
5	384	5.0	258	43.3	107-2800	L	G	A	7-2⅝	13¼	PC	Ha	Zen	M	AL	AL	P.BB	GO	Spi	Shu 5582B	Ros	L4IHV	490	a	TD	120	74½	34	45¼x2½	56x3	½
6	529	4.4	350	51.3	114-2200	L	G	C	7-3	12½	PC	Ha	Zen	M	AL	AL	D.Co	GO	Spi	Shu 678-28	Ros	Ws 4IA	552	a	TD	138	89½	34	46x3	56x3½	½
7	299	4.9	198	33.7	85-2800	L	G	C	4-2⅝	9½	PC	Mo	Til	M	AL	AL	D.BL	Pe	Blo	Tim 33000H	Ros	L4IHV	375	a	FD	120	77¼	34	42x2¼	50x3	½
8	190	5.5	130	23.4	70-3600	L	G	A	4-2¼	4⅞	CC	No	Car	M	DR	DR	P.BB	Fe	Own	Own	Own	O4IH	106	c	TX	52½	....	44⅛	36x1½	53½x1½	½
9	190	5.5	130	23.4	70-3600	L	G	A	4-2¼	4⅞	CC	No	Car	M	DR	DR	P.BB	Fe	Own	Own	Own	O4IH	106	c	TX	60½	33⅛	....	36x1½	53½x1½	½
10	196	4.6	124	21.0	48-2800	L	G	A	3-2¼	6½	CC	No	Car	M	DR	DR	P.BB	Fe	Own	Own	Own	O4IH	121	p	TX	53⅞	26½	42⅛	35½x1¾	53½x1⅛	N
11	211	5.3	134	25.3	60-3100	L	C	S	4-2¼	6¼	CC	No	Car	M	DR	DR	P.BB	Fe	Own	Own	Own	O4IH	121	p	TX	53⅞	26½	42⅛	35½x1¾	53½x1⅛	N
12	196	4.6	124	21.0	48-2800	L	G	A	3-2¼	6½	CC	No	Car	M	DR	DR	P.BB	Fe	Own	Own	Own	O4IH	175	a	TX	91½	50½	34	36x1¾	48x2¼	N
13	201	5.0	132	23.5	62-3000	L	C	S	4-2¼	6¼	CC	No	Car	M	DR	DR	P.BB	Fe	Own	Own	Own	O4IH	175	a	TX	91½	50½	34	36x1¾	48x2¼	N
14	196	4.6	124	21.0	48-2800	L	G	S	3-2¼	6½	CC	Ha	Zen	V	NE	NE	P.BB	Fe	Own	Own	Ha	O4IH	206	p	TX	85½	50	37⅞	39x2	48x2½	N
15	208	5.1	132	27.3	63-3200	L	C	S	7-2⅝	10⅛	CC	Ha	Zen	V	NE	NE	P.BB	Fe	Own	Own	Ha	O4IH	206	p	TX	85½	50	37⅞	39x2	48x2½	N
16	196	4.6	124	21.0	48-2800	L	G	A	3-2¼	6½	CC	No	Car	M	DR	DR	P.BB	Fe	Own	Own	Own	O4IH	175	a	TX	91½	50½	34	36x1¾	48x2¼	N
17	201	5.0	132	23.5	62-3000	L	C	S	4-2¼	6¼	CC	No	Car	M	DR	DR	P.BB	Lo	Own	Own	Own	O4IH	175	a	TX	91½	50½	34	36x1¾	48x2¼	N
18	196	4.6	124	27.3	48-2800	L	G	A	3-2¼	6½	CC	No	Car	M	DR	DR	P.BB	Lo	Own	Own	Own	O4IH	187	a	TX	88⅜	52½	37½	39x2	48x2½	N
19	211	5.2	134	31.5	60-3100	L	C	S	4-2¼	6¼	CC	No	Car	M	DR	DR	P.BB	Lo	Own	Own	Own	O4IH	187	a	TX	88⅜	52½	37½	39x2	48x2½	N
20	208	5.1	132	27.3	63-3200	L	C	S	7-2⅝	10⅛	CC	Ha	Zen	M	DR	DR	P.BB	Fe	Own	Own	Ha	O4IH	305	a	TX	119⅛	62¾	34	40x2½	56x3	N
21	217	5.8	144	25.3	75-3200	L	C	S	4-2¼	6¼	CC	Ha	Car	M	DR	DR	P.BB	Fe	Own	Own	Own	O4IH	229	a	TX	145	84⅛	38⅛	39x2	48x2½	N
22	309	4.7	200	31.5	96-3000	L	G	S	7-2⅝	11¾	CC	Ha	Det	M	DR	DR	P.BB	Lo	Own	Own	Jac	O4IH	350	a	CD	124⅛	69¾	33⅛	42x3	56½x3½	N
23	241	5.3	167	39.2	78-3000	L	G	S	7-2⅛	11	CC	KP	Zen	V	NE	NE	P.BB	Lo	Own	Own	Ha	O4IH	382	p	TX	82¼	54¾	34	39x2½	45x3	N
24	309	4.7	200	21.0	96-3000	L	G	S	7-2⅝	11¾	CC	Ha	Det	M	DR	DR	P.BB	Fe	Own	Own	Jac	O4IHV	416	a	CD	149⅛	89¼	34	42x3	56x3½	½
25	384	5.0	262	25.3	115-3000	L	G	S	9-2¾	13	CC	Ha	Str	M	DR	DR	P.BB	Fe	Own	Own	Jac	BWs41A	650	a	CD	149⅛	89¾	34⅛	42x3	56x3½	½
26	210	4.3	130	22.5	40-2150	L	G	A	3-2¼	6⅛	FP	No	Zen	M	DR	DR	P.Lo	Pe	Spi	Tim 30010H	Ros	L4IH	257	H	TX	120	65⅝	34	32¾x2	50x2½	½
27	219	5.2	137	23.5	58-2500	L	G	A	4-2¼	7⅛	FP	No	Zen	M	DR	DR	P.Lo	Pe	Spi	Tim 30010H	Ros	L4IH	257	H	TX	132	72	34	32¾x2½	50x2½	½
28	255	5.1	170	27.3	68-2500	L	G	A	4-2⅜	7⅛	FP	No	Zen	M	DR	DR	P.Lo	Pe	Spi	Tim 31000H	Ros	L4IH	306	G	TX	144	71½	34	37x2½	56x3	½
29	381	4.4	240	40.8	82-2200	L	G	A	7-2⅜	12½	PC	No	Zen	M	DR	DR	P.BL	Pe	Spi	Tim 33020H	Ros	L4IHV	355	G	TX	167½	97½	34	41x2½	56x3	½
30	381	4.4	240	40.8	82-2200	L	G	A	7-2⅜	12½	PC	No	Zen	M	DR	DR	P.BL	Pe	Spi	Tim 33020H	Ros	L4IHV	398	G	TX	167½	97½	34	41x2½	56x3	½
31	517	4.5	340	51.3	108-2000	L	G	A	7-3	13⅛	PC	No	Zen	M	DR	DR	P.BL	Pe	Spi	Tim 35000H	Ros	L4IHV	717	G	FD	172⅛	101⅝	33½	41x3	56x3½	½
32	200	4.7	126	24.0	50-2700	L	C	A	3-2½	5⅞	CC	KP	Car	M	DR	DR	P.BB	Lo	Spi	Cla F212	Ge	L4IH	200	a	TX	....	....	34	38½x2¼	50x2½	N
33	200	4.7	126	24.0	50-2700	L	C	A	3-2½	5⅞	CC	No	Zen	M	DR	DR	P.BB	Lo	Cle	Cla F212	Ge	L4IH	191	P	TX	103	51½	34	38½x2¼	50x2½	N
34	215	4.9	142	27.3	72-3400	L	C	A	4-2⅜	6⅜	CC	Mo	Zen	M	DR	DR	P.BB	Lo	Cle	Cla F212	Ge	L4IH	191	P	TX	103	51½	34	38½x2¼	50x2½	½
35	215	4.9	142	27.3	72-3400	L	C	A	4-2⅜	6⅜	CC	Mo	Zen	M	DR	DR	P.BB	Lo	Cle	Tim 31020H	Ge	L4IH	269	P	TI	95	15	34	38x2¼	50x2½	½
36	251	4.1	162	25.6	50-2000	L	G	C	3-2⅜	7½	CC	Wa	Zen	V	DR	DR	P.BB	Lo	PS	Own 7720	Ros	L4IH	337	a	TI	119	71	34	38x2½	52x3	½
37	251	4.1	162	25.6	50-2000	L	G	C	3-2⅜	7½	CC	Wa	Zen	V	DR	DR	P.BB	Lo	PS	Own 7720	Ros	L4IHV	379	a	TI	119	71	34	38x2½	51¼x3	½
38	315	5.0	200	33.8	73-2500	L	G	A	7-2⅝	12½	FP	Wa	Zen	M	DR	DR	P.BB	Lo	Spi	Cla F318	Ge	L4IHV	315	a	FD	115	82	34	42x2½	52x3	½
39	381	4.8	240	40.8	85-2400	L	G	A	7-2⅝	12½	FP	Wa	Zen	M	DR	DR	P.BB	Lo	Spi	Cla F318	Ros	L4IHV	379	a	FD	115	82	34	42x2½	52x3	½
40	339	4.2	212	38.4	80-2200	H	C	T	7-2⅝	13⅛	CC	KP	Zen	M	DR	DR	P.BB	Lo	PS	Own 7738	Ros	L4IHV	379	a	TI	117	79	34	42x2½	54x3	½
41	339	4.2	212	38.4	80-2200	H	C	T	7-2⅝	13⅛	CC	KP	Zen	M	DR	DR	P.BB	Lo	PS	Own 7738	Ros	L4IHV	379	a	TI	117	79	34	42x2½	54x3	½
42	288	4.6	181	32.6	73-2600	L	G	C	7-2⅝	12⅜	CC	KP	Zen	M	DR	DR	P.BB	Lo	PS	Cla F304	Ros	L4IH	270	a	TI	113	71	34	40x2¼	52x3	½
43	318	4.6	202	36.0	80-2500	L	G	C	7-2⅝	12⅜	CC	KP	Zen	M	DR	DR	P.BB	Lo	PS	Cla F318	Ros	L4IHV	379	a	TI	113	71	34	40x2¼	52x3	½
44	318	4.6	202	36.0	80-2500	L	G	C	7-2⅝	12⅜	CC	KP	Zen	M	DR	DR	P.BB	Lo	PS	Cla F318	Ros	L4IHV	379	a	TI	113	71	34	40x2¼	52x3	½
45	381	4.2	237	40.8	85-2200	H	C	C	7-2¾	13⅛	CC	KP	Zen	M	DR	DR	P.BL	Lo	Spi	Own 7720	Ros	L4IHV	465	a	TD	117	79	34	42x2½	54x3	½
46	428	4.2	268	45.9	100-2200	H	C	C	7-2¾	13⅛	CC	KP	Zen	M	DR	DR	P.BL	Lo	Spi	Tim 36020H	Ha	L4IHV	513	a	TD	162	102	34	42x3	56x3½	½
47	428	4.2	268	45.9	100-2200	H	C	C	7-2¾	13⅛	CC	KP	Zen	M	DR	DR	P.BL	Lo	Spi	Tim 36020W	Ha	W4IA	623	a	TD	162	102	34	42x3	56x3½	½
48	471	3.7	288	40.0	61-1350	L	G	C	3-2⅝	11⅛	FP	Pe	Zen	V	AB	DR	P.BB	Lo	PS	Own 5008	Ge	T21MV	568	a	RI	151	87	38	44x3	56x3½	½
49	428	4.2	268	45.9	100-2200	H	C	C	7-2¾	13⅛	CC	KP	Zen	M	DR	DR	P.BL	Lo	PS	Own 5008	Ros	T21MV	458	a	RI	151	87	38	44x3	56x3½	½
50	200	4.6	128	24.0	50-2800	L	G	A	3-2	7	PS	No	Zen	P	Ow	Ow	P.Ow	Ow	Spi	Own	Own	O4IM	186	a	4I	....	....	44	31⅛x1¾	46x2¼	N
51	200	4.6	128	24.0	50-2800	L	G	A	3-2	7	PS	No	Zen	P	Ow	Ow	P.Lo	Ow	Spi	Own	Own	O4IM	475	a	2I	94½	51⅛	38	33x2¼	50x2½	O
52	200	4.6	128	24.0	50-2800	L	G	A	3-2	7	PS	No	Zen	P	Ow	Ow	P.Lo	Ow	Spi	Own	Own	O4IM	475	a	2I	120⅛	76⅛	38	33x2¼	50x2½	O
53	251	4.5	160	25.6	50-2000	H	G	C	3-2⅜	8	PC	Wa	Zen	V	AL	AL	D.DG	Pe	Blo	Own H	Ros	OT/4XM	238	G	2I	112	81	36	42¾x2½	52¾x2½	½
54	315	4.5	200	33.7	72-2500	L	G	C	7-2⅝	12⅜	PC	Wa	Zen	V	NE	NE	D.BL	Pe	Blo	Own H	Ros	OT/4XM	252	G	2I	115½	81½	36	42¾x2½	52¾x2½	½
55	381	4.5	240	40.8	85-2400	L	G	C	7-2⅝	12⅜	PC	Wa	Zen	M	NE	NE	D.BL	Pe	Blo	Own U	Ros	OT/4XM	238	G	2I	126	86	36	42¾x2½	52¾x2½	½
56	398	4.0	210	36.1	56-1350	T	G	C	3-2	12	PC	Pe	Str	G	NE	NE	O.ME	Mc	Blo	Own B	Ros	OT/4XM	238	G	2I	130	93	36	42¾x2½	52¾x2½	N
57	411	4.6	265	40.8	91-2300	L	G	C	7-3	13⅞	PC	Wa	Zen	M	NE	NE	O.HS	Pe	Blo	Own U	Ros	OT/4XM	238	G	2I	132	93	36	42¾x2½	52¾x2½	N
58	411	4.6	265	40.8	91-2300	L	G	C	7-3	13⅞	PC	Wa	Zen	M	NE	NE	D.BL	Pe	Blo	Own U	Ha	OT/4XM	238	G	4X	132	93	36	42¾x2½	52¾x2½	½
59	462	4.5	300	45.9	102-2400	L	G	C	7-3	13⅞	PC	Wa	Zen	V	NE	NE	O.HS	Pe	Blo	Own M	Ha	OT/4XM	238	G	2I	132	93	36	42¾x2½	52¾x2½	½
60	462	4.5	300	45.9	102-2400	L	G	C	7-3	13⅞	PC	Wa	Zen	M	NE	NE	D.BL	Pe	Blo	Own M	Ha	OT/4XM	238	G	2I	132	93	36	42¾x2½	52¾x2½	N
61	517	4.6	330	51.3	110-2300	L	G	C	7-3	13⅞	PC	Wa	Zen	M	NE	NE	D.BL	Pe	Blo	Wis 131F	Ros	B4IMV	324	G	T4	153½	110½	34	48x3½	52x4	½
62	517	4.6	330	51.3	110-2300	L	G	C	7-3	13⅞	PC	Wa	Zen	M	NE	NE	D.BL	Pe	Blo	Own M	Ros	O4TB	722	G	4X	132	93	36	42¾x2½	52¾x2½	½
63	411	4.6	265	40.8	91-2300	L	G	C	7-3	13⅞	PC	Wa	Zen	M	NE	NE	D.BL	Pe	Blo	Own U	Ros	O4IM	238	G	4D	Opt	Opt	42	42¾x2½	52x4	½
64	677	4.4	460	60.	125-2000	L	G	C	4-3½	9	PC	Wa	Zen	M	NE	NE	D.BL	Pe	Blo	Wis 131F	Ros	B4IMV	324	G	T4	153½	110½	34	48x3½	52x4	N
65	462	..	330	45.9	125-2500	L	G	C	7-3	13⅞	PC	Wa	Zen	M	NE	NE	D.BL	Pe	Blo	Wis 1237	Ros	4A	610	G	T4	97¼	67¼	34	48x3½	52x3½	½
66	200	4.9	127	26.3	66-3000	L	C	B	3-2⅛	5⅞	CC	No	Ma	M	DR	DR	P.Ow	Lo	MM	Own	Jac	B4IM	211	p	4I	87	48	34	38x2	50¼x2½	N
67	200	5.1	132	26.3	66-3200	L	C	B	3-2⅛	5⅞	FP	No	Ma	M	DR	DR	P.Ow	Lo	Own	Own	Jac	O4IM	175	p	2I	85½	50¼	37	36x1¾	45x2½	½
68	221	4.6	155	24.3	69-2800	H	G	B	4-2⅜	7⅛	PC	Opt	Zen	M	DR	DR	P.Ow	Hr	Own	Own	Jac	O4IM	186	p	2I	85½	50¼	37⅛	36x1¾	45x2½	½
69	200	5.1	132	26.3	66-3200	L	C	B	3-2⅛	5⅞	FP	No	Ma	M	DR	DR	P.Ow	Lo	Spi	Own	Jac	B4IM	290	a	TX	87	48	34	38x2	50¼x2½	½
70	257	4.5	185	28.3	76-2500	H	G	C	4-2⅜	8½	PC	Ha	Ma	M	DR	DR	dp.Ow	Lo	Spi	Own	Jac	B4IM	239	pa	TX	87	48	34	38x2	50½x2½	N
71	200	5.1	132	26.3	66-3200	L	C	B	3-2⅛	5⅞	FP	No	Ma	M	DR	DR	P.Ow	Lo	Cle	Own	Jac	O4IM	175	p	2I	85½	50¼	37	36x1¾	45x2½	½
72	221	4.6	155	24.3	69-2800	H	G	B	4-2⅜	7⅛	PC	Opt	Zen	M	DR	DR	P.Ow	Hr	Cle	Own	Jac	O4IM	186	pa	2I	85½	50¼	37⅛	36x1¾	45x2½	½
73	257	4.5	185	28.3	76-2500	H	G	C	4-2⅜	8½	PC	Ha	Ma	M	DR	DR	dp.Ow	Lo	Spi	Own	Jac	B4IM	290	a	TX	87	48	34½	38x2	50¼x2½	½
74	257	4.5	185	28.3	76-2500	H	G	C	4-2⅜	8½	PC	Ha	Ma	M	DR	DR	dp.Ow	Lo	Spi	Own	Jac	B4IM	288	a	TX	107	59	34⅛	38x2½	50x3	½
75	257	4.5	185	28.3	76-2500	H	G	C	4-2⅜	8½	PC	Ha	Ma	M	DR	DR	dp.Ow	Lo	Spi	Own	Jac	B4IM	345	a	TX	107	59	34⅛	38x2½	50x3	½
76	257	4.5	185	28.3	76-2500	H	G	B	4-2⅜	7⅛	PC	Ha	Ma	M	DR	DR	dp.Ow	Lo	Spi	Own	Jac	B4IM	328	a	TX	107	60	34	38x2	50x3	½
77	257	4.5	185	28.3	76-2500	H	G	B	4-2⅜	7⅛	PC	Ha	Ma	M	DR	DR	dp.Ow	Lo	Spi	Own	Jac	B4IM	320	a	TX	107	59	34⅛	38x2½	50x3	½
78	257	4.5	185	28.3	76-2500	H	G	C	4-2⅜	8½	PC	Ha	Zen	M	DR	DR	dp.Ow	Lo	Spi	Own	Jac	B4IM	337	a	TX	107	60	34	38x2½	50x3	½
79	257	4.5	185	28.3	76-2500	H	G	C	4-2⅜	8½	PC	Ha	Ma	M	DR	DR	dp.Ow	Lo	Spi	Own	Jac	B4IM	320	a	TX	107	59	34⅛	38x2½	50x3	½
80	257	4.5	185	28.3	76-2500	H	G	C	4-2⅜	8½	PC	Ha	Ma	M	DR	DR	dp.Ow	Lo	Spi	Own	Jac	B4IM	345	a	TX	107	59	34⅛	38x2½	50x3	½
81	331	4.4	230	33.7	94-2500	H	G	A	4-2½	8⅛	PC	Ha	Str	M	DR	DR	dp.Ow	Lo	Spi	Own	Jac	B4IMV	379	a	TX	125	70	34⅛	40x3	50x3	½
82	331	4.4	230	33.7	94-2500	H	G	A	4-2½	8⅛	PC	Ha	Str	M	DR	DR	dp.Ow	Lo	Spi	Own	Jac	B4IMV	379	a	TX	125	69¼	34⅛	40x3	54x3	½
83	331	4.4	230	33.7	94-2500	H	G	C	4-2½	8⅛	PC	Ha	Ma	M	DR	DR	dp.Ow	Lo	Spi	Own	Jac	B4IM	418	a	TX	125	69¼	34⅛	40x3	54x3	½
84	400	4.6	296	40.9	110-2300	H	G	A	4-2.7	8⅛	FP	Ha	Str	M	DR	DR	dp.Ow	Lo	Spi	Own	Jac	B4IMV	449	a	TX	125	69¼	34⅛	40x3	54x3	½
85	331	4.4	230	33.7	94-2500	H	G	A	4-2½	8⅛	PC	Ha	Str	M	DR	DR	dp.Ow	Lo	Cle	Own	Jac	B4IM	483	a	TD	125	70	34⅛	40x3	54x3	½
86	400	4.6	296	40.9	110-2300	H	G	A	4-2.7	8⅛	FP	Ha	Str	M	DR	DR	dp.Ow	Lo	Spi	Own	Jac	B4IMV	557	a	TX	125	70	34⅛	40x3	54x3	½
87	400	4.6	296	40.9	110-2300	H	G	A	4-2/7	8⅛	FP	Ha	Str	M	DR	DR	dp.Ow	Lo	Spi	Own	Jac	B4IMV	594	a	TX	210	117	34⅛	50x3½	54x3	½
88	400	4.6	296	40.9	110-2300	H	G	A	4-2/7	8⅛	FP	Ha	Str	M	DR	DR	dp.Ow	Lo	Spi	Own	Jac	B4IMV	594	a	TX	137	82	34⅛	50x3½	54x3	½
89	525	4.5	380	48.6	128-2100	H	C	A	7-2¾	14⅛	FP	Ha	Str	M	DR	DR	dp.Ow	Lo	Spi	Own	Jac	B4IMV	594	a	TX	137	82	34⅛	50x3½	54x3	½
90	525	4.5	380	48.6	128-2100	H	C	A	7-2¾	14⅛	FP	Ha	Str	M	DR	DR	dp.Ow	Lo	Spi	Own	Jac	B4IAV	638	a	TX	137	82	34⅛	50x3½	....	N
91	616	4.5	450	57.0	149-2100	H	C	A	7-2¾	14⅛	FP	Ha	Str	M	DR	DR	dp.Ow	Lo	Spi	Own	Jac	B4IA	638	a	TX	137	82	34⅛	50x3½	....	N
92	200	4.7	121	27.4	50-2800	L	C	A	3-2½	5⅞	FP	No	Til	M	AL	AL	D.Jo	Pe	Blo	Tim 30000H	Ros	L4IH	249	p	FD	81½	51¾	34	36x2¼	45x2½	½
93	214	5.3	142	27.4	71-3200	L	C	A	4-2⅜	6¾	FP	No	Til	M	AL	AL	D.Jo	Pe	Blo	Tim 30000H	Ros	L4IH	249	p	FD	81½	51¾	34	36x2¼	45x2½	½
94	200	4.7	121	24.0	50-2800	L	C	A	3-2½	5⅞	PC	No	Til	M	AL	AL	D.Jo	Pe	Blo	Tim 30000H	Ros	L4IH	249	p	FD	81¾	51½	34	36x2¼	45x2½	½
95	214	5.3	142	27.3	71-3200	L	C	A	4-2⅜	6¾	PC	No	Til	M	AL	AL	D.Jo	Pe	Blo	Tim 30000H	Ros	L4IH	249	p	FD	81¾	51½	34	36x2¼	45x2½	½
96	299	4.9	198	33.7	85-2800	L	G	C	4-2⅝	9¼	PC	No	Til	M	AL	AL	P.BL	Pe	Blo	Tim 30000	Ros	L4IH	249	p	FD	81¾	51½	34	36x2¼	45x2½	½
97	224	4.7	146	25.3	61-2900	L	G	C	4-2⅝	8⅛	PC	Mo	Zen	V	AL	AL	D.Jo	Pe	Blo	Tim 31000H	Ros	L4IH	260	p	FD	94	60½	34	40x2¼	50x2½	½
98	299	4.9	198	33.7	85-2800	L	G	C	4-2⅝	9¼	PC	No	Til	M	AL	AL	P.BL	Pe	Blo	Tim 31000	Ros	L4IH	260	p	FD	94	60½	34	40x2¼	50x2½	½
99	227	4.7	136	27.2	55-2400	L	G	C	3-2½	5⅞	PC	Mo	Til	M	AL	AL	D.Jo	Pe	Blo	Tim 31000H	Ros	L4IH	260	p	FD	81	51¾	34	36x2¼	45x2½	½
100	248	5.0	150	27.3	70-3000	L	C	C	7-2⅜	10	FP	Mo	Til	M	AL	AL	D.Jo	Pe	Blo	Tim 31000H	Ros	L4IH	260	p	FD	81	51¾	34	36x2¼	45x2½	½
101	278	4.7	182	31.5	85-3300	L	G	A	4-2⅝	9¼	PC	Mo	Til	M	AL	AL	P.BL	Pe	Blo	Tim 31000H	Ros	L4IH	260	P	FD	81	51¾	34	36x2¼	45x2½	½
102	282	5.4	176	33.7	73-2800	L	G	C	7-2½	10⅛	PC	Mo	Zen	M	AL	AL	P.BL	Pe	Blo	Tim 31000	Ros	L4IH	260	p	FD	120	77¼	34	42x2¼	56x3	½
103	299	4.9	198	33.7	85-2800	L	G	C	4-2⅝	9¼	P	No	Til	M	AL	AL	P.BL	Pe	Blo	Tim 31000	Ros	L4IH	260	p	FD	120	77¼	34	42x2¼	56x3	½
104	380	4.3	238	40.8	88-400	H	C	C	7-2¾	13⅛	PC	No	Zen	M	AL	AL	P.BL	Pe	Blo	Tim 33000H	Ros	L4IHV	330	a	FD	120	77¼	34	42x2¼	56x3	½
105	299	4.9	198	33.7	85-2800	L	G	C	4-2⅝	9¼	PC	Mo	Til	M	AL	AL	P.BL	Pe	Blo	Tim 33000	Ros	L4IHV	330	a	FD	120	77¼	34	42x2¼	56x3	½
106	428	4.1	268	45.9	100-2200	H	C	C	7-2¾	13⅛	PC	No	Zen	M	AL	AL	P.BL	Pe	Blo	Tim 33000H	Ros	L4IHV	330	a	FD	120	77¼	34	42x2¼	50x3	½
107	318	4.5	203	36.	80-2700	L	G	C	7-2⅝	12⅛	CC	Mo	Zen	M	AL	AL	D.Jo	Pe	Blo	Tim 33000H	Ros	L4IHV	375	a	FD	127	74¼	34	42x2¼	56x3	½
108	353	4.8	245	36.2	98-2700	L	G	C	4-2¾	10	PC	Mo	Til	M	AL	AL	D.Jo	Pe	Blo	Tim 33000H	Ros	L4IHV	375	a	FD	127	74¼	34	42x2¼	56x3	½
109	448	17.	280	38.0	83-1800	H	G	N	5-3¼	12	P	En	No	M	CI	LN	D.BL	Pe	Blo	Tim 33000	Ros	L4IHV	375	a	FD	127	74¼	34	42x2½	56x3	½
110	380	4.3	238	40.8	88-2400	H	C	C	7-2¾	13⅛	PC	Mo	Zen	M	AL	AL	D.Jo	Pe	Blo	Tim 33000	Ros	L4IHV	375	a	FD	156	90	41½	44x2½	60x3	½
111	428	4.1	268

Line Number	MAKE AND MODEL	GENERAL (See Keynote)						TIRE SIZE		MAJOR UNITS									FRAME	
										ENGINE		TRANSMISSION		REAR AXLE						
		Tonnage Rating	Chassis Price	Standard Wheelbase	Max. W. B. Furnished	Gross Vehicle Weight	Chassis Wt. (Stripped)	Front	Rear	Make and Model	No. of Cylinders Bore and Stroke	Make and Model	Location and Forward Speeds / Aux. Location and Speeds	Make and Model	Gear and Type	Drive and Torque	GEAR RATIOS In High	GEAR RATIOS In Low	Side Rail Dimensions	Type
1	Hug	87Q	5	4875	144	144	27875	8059	B10.50/20	DB10.50/20	Bud K428	6-4½x4¾	Fu MHOG	A 8	No	Wis 1737K	2F	H	9.16	99.	8x4x¼	I
2	(Concluded)	43L	5	3850	146	201	24160	8960	B9.75/20	DB9.75/20	Bud L525	6-4½x5½	Fu VUOG	U 5	No	Wis 1737KW	2F	H	9.14	64.	8x3x¼	T
3		97L	5	5815	144	144	31600	10810	B10.50/20	DB10.50/20	Bud L525	6-4½x5½	Fu VU	U 5	A 3	Wis 19027	2F	H	11.1	178.	8x4x¼	T
4	Indiana	85	1½	885	141	186	10000	3950	B6.50/20	DB6.50/20	Her JXB	6-3⅝x4¼	BL 124	U 4	No	Tim 53200H	SF	H	5.66	35.1	7½x2½x½	T
5		95	2	1095	141	186	12000	4400	P32x6	DP32x6	Her JXC	6-3¾x4¼	BL 224	U 4	No	Tim 54300H	SF	H	5.85	35.2	7½x2½x½	T
6		95DR	2-2½	1275	141	186	15000	4650	B7.50/20	DB7.50/20	Her JXC	6-3¾x4¼	BL 224	U 4	Op	Wis 4916L	2F	H	6.66	41.2	7½x2½x½	T
7		106DR	2½	1850	156	212	16000	6000	B7.50/20	DB7.50/20	Her WXC	6-4x4½	BL 324	U 4	No	Wis 4916L	2F	R	6.66	44.5	8x3x¼	T
8		17	2½	2450	170	224	18000	6600	B8.25/20	DB8.25/20	Her YXC	6-4⅝x4¾	BL 334	U 4	Op	Tim 58200H	SF	R	6.14	37.8	8½x3x⅜	T
9		17DR	3	2675	170	224	19000	6700	B8.25/20	DB8.25/20	Her YXC	6-4⅝x4¾	BL 334	U 4	Op	Wis 70000	2F	R	6.28	38.6	8½x3x⅜	T
10		19DR	3½	3400	170	224	22000	8100	B9.00/20	DB9.00/20	Her YXC	6-4⅝x4¾	BL 524	U 4	Op	Wis 1237H	2F	R	7.2	52.3	8½x3x⅜	T
11		43DR	4-5	4300	170	224	25000	8500	B9.75/20	DB9.75/20	Her RXB	6-4½x5¼	BL 524	U 4	Op	Wis 1627KH	2F	R	6.96	50.7	8½x3x⅜	T
12		45DR	5	4800	170	224	25000	8700	B9.75/20	DB9.75/20	Her RXC	6-4⅝x5¼	BL 534	U 4	Op	Wis 1737H	2F	R	7.14	45.4	8½x3x⅜	T
13		47DR	5-7	7000	188	224	28000	10500	B10.50/20	DB10.50/20	Cum 6H Dle.	6-4⅛x6	BL 735	A 5	No	Wis 1910W	2F	R	7.16	45.0	8½x3x⅜	.....
14	International (8)	D1	½	360	113	113	4180	2180	B5.25/18	B5.25/18	Own D	6-3⅛x4¾	Own D	U 3	No	Own D-55	S½	H	4.18	12.7	5½x2¼x⅛	T
15		M2	1	850	118	118	7000	3180	B6.50/20	B6.50/20	Wau XAH	4-3⅝x4½	Own H-4-A	U 4	No	Own 713	SF	H	6.16	39.5	11½x2¾x¼	T
16		A2	1½	615	136	160	8000	2935	B6.00/20	B6.00/20	Wau XAH	4-3⅝x4½	Own H-4-A	U 4	No	Own 708	SF	H	6.16	39.5	5½x2¾x⅛	T
17		B2	1½	665	136	160	8000	2945	B6.00/20	B6.00/20	Wau XAH	4-3⅝x4½	MM "O"	U 3	No	Own 704	SF	H	6.16	47.3	5½x2¾x⅛	T
18		A3	1½	795	136	160	10000	3572	P30x5	P32x6	Lyc SAH	6-3¼x4½	Own H-4-A	U 4	No	Own 710	SF	H	5.28	33.8	7x3¼x¼	T
19		A3½	1½	970	136	160	10100	3600	B6 50/20	DB6.50/20	Lyc SAH	6-3¼x4½	WG T7	U 4	No	Own 710	SF	H	5.28	33.8	7x3¼x¼	T
20		AL3	1½	895	138	164	10000	4032	B6.00/20	DB6.00/20	Lyc 4SLH	6-3¼x4½	WG T7	U 4	No	Own 800	S½	H	6.50	42.9	6½x2¼x¼	T
21		B4	2	995	145	185	12750	4200	B6.50/20	DB6.50/20	Own FAB-3	6-3⅞x4	Own H-4-A	U 4	No	Own 750	SF	H	6.5	41.6	8x3¼x⅜	T
22		A4	2	1750	145	185	14200	5221	P32x6	DP32x6	Own FBB	6-3⅝x4½	OwnH-5	U 5	No	Own 902	SF	H	6.50	47.8	7x3¼x¼	T
23		A5	3	2350	156	210	17000	5895	P34x7	DP34x7	Own FBB	6-3⅝x4½	OwnH-5	U 5	No	Own 1002	SF	H	7.16	64.7	8x3¼x¼	T
24		A6	3	2675	156	210	19000	6120	P34x7	DP34x7	Own FBB	6-3⅝x4½	OwnH-5	U 5	No	Own 1150	SF	H	8.5	76.8	8½x3¾x⅜	T
25		W2	3½	3900	148	200	22000	8400	S36x5	S36x10	HaS 151	4-4¼x5½	Own H-6	U 5	No	Own 1200	2F	H	6.85	83.9	7x3x¼	T
26		W3	5	4850	160	233	28000	10125	S36x6°	S40x12°	HaS 152	4-4¾x5½	OwnH -7	U 5	No	Own 1300	2F	H	7.85	70.5	8x3x¼	T
27		A7	5-7½	6200	160	225	36000	11590	B9.75/20	DB9.75/20	Own FDB	6-4½x5½	Own H-7	U 5	No	Own 1301	2F	H	6.37	57.2	12½x3¼x⅝	T
28		A8	7½	6300	160	225	36000	11590	B9.75/20	DB9.75/20	Own FEB	6-5x5½	Own H-7	U 5	No	Own 1301	2F	H	6.37	57.2	12½x3¼x⅝	T
29	Kenworth	86	1½-2	1120	141	165	10100	3400	B7.00/20	B7.00/20	Her JXA	6-3¼x4¼	BL 214	U 4	..	Cla B370	SF	H	5.4	34.6	5½x3¼x¼	P
30		88	2	1480	146	200	13400	4400	P32x6	DP32x6	Her JXC	6-3¾x4¼	BL 234	U 4	Op	Tim 54300H	SF	H	5.83	37.4	8x3¼x¼	T
31		101B	2-2½	2050	144	186	13400	4700	B7.50/20	DB7.50/20	Bud H298	6-3¾x4¼	BL 234	U 4	..	Tim 54300H	SF	H	5.83	37.4	5½x3¼x¼	T
32		89	2½	1670	146	200	15000	4600	B7.50/20	DB7.50/20	Her JXC	6-3¾x4¼	BL 234	U 4	Op	Tim 56200H	SF	H	6.16	39.5	8x3x¼	T
33		127	2½-3	2600	154	202	16300	5490	B8.25/20	DB8.25/20	Her WXC	6-4x4½	BL 334	U 4	..	Tim 56200H	SF	H	6.16	40.7	8x2¼x¼	T
34		90	3	1820	146	200	18200	5500	B7.50/20	DB7.50/20	Her JXC	6-3¾x4¼	BL 234	U 4	Op	Tim 58205H	SF	H	6.83	43.8	8x3x¼	T
35		146B	3-4	3300	158	206	19500	5960	B9.00/20	DB9.00/20	Bud K393	6-4⅛x4¾	BL 334	U 4	Op	Tim 58205H	SF	H	6.83	43.4	8x2¼x¼	T
36		166B	3½-4	3850	156	204	20700	6890	B9.00/20	DB9.00/20	Bud K393	6-4⅛x4¾	BL 334	U 4	Op	Tim 58205H	SF	H	6.83	43.4	7-9x3x¼	T
37		166A	3½-4	4330	156	204	20700	6890	B9.00/20	DB9.00/20	HaS 147	6-4x5	BL 334	U 4	Op	Tim 58205H	SF	H	6.83	43.4	7-9x3x¼	T
38		18	4-5	4675	155	221	25600	7710	B9.75/20	DB9.75/20	Her YXC2	6-4½x4¾	BL 1554	U 4	A 3	Tim 57520H	2F	H	7.33	105.	7-9x3x¼	T
39		241	5-7	5450	169	221	27800	9000	B9.75/20	DB9.75/20	Her RXB	6-4½x5¼	BL 714	U 4	A 3	Tim 76720W	2F	H	7.33	85.5	7-9x3x¼	T
40		241A	5-7	6500	169	228	27800	9500	B9.75/20	DB9.75/20	HaS 160	6-4½x5½	BL 714	U 4	A 3	Tim 76720W	2F	H	7.33	85.5	8x3x⅜	C
41		241B	5-7	6150	174	228	27800	9500	B9.75/20	DB9.75/20	Bud GL-6	6-4½x6	BL 714	U 4	A 3	Tim 76720W	2F	H	7.33	85.5	8x3x⅜	C
42		241C	5-7	7200	174	228	27800	10000	B9.75/20	DB9.75/20	HaS 175	6-5x6	BL 714	U 4	A 3	Tim 76720W	2F	H	6.38	86.5	8x3x⅜	C
43	Kleiber	80	1½-2½	1300	140	160	9300	3625	B6.50/20	DB6.50/20	Con 18E	6-3¼x4	BL 224	U 4	No	Tim 53200H	BF	H	5.81	34.0	5½x3¼x⅛	C
44		100	2-3½	1750	170	180	11400	4400	B7.00/20	DB7.00/20	Con 16C	6-3¼x4⅝	BL 314	U 4	No	Tim 54200H	BF	H	6.6	38.7	7½x3⅜x¼	T
45		120	2½-4½	2350	170	180	13200	5150	B7.50/20	DB7.50/20	Con 16R	6-4x4¼	BL 314	U 4	No	Tim 56200H	BF	H	6.17	33.4	7½x3⅜x¼	T
46		140	3-5½	3300	180	190	19500	6500	B9.00/20	DB9.00/20	Con 18R	6-4x4½	BL 314	U 4	No	Eat 2413H	2F	H	7.1	38.7	7½x3⅜x¼	T
47		210	4-6	4000	190	192	23400	7100	B9.75/20	DB9.75/20	Con 20R	6-4½x4¾	BL 55	A 7	No	EatDR2412H	2F	R	7.25	77.0	7½x3⅜x¼	C
48		260	7	5000	206	210	26000	9000	B9.75/20	DB9.75/20	Con 21R	6-4¾x4¾	BL 714	A 4	A 3	Eat 65041W	2F	R	8.5	91.0	8x3½x⅜	C
49	La Fr. Republic	C-2	2	1100	150	162	10000	3800	B6.00/20	DB6.00/20	Lyc SA	6-3¼x4½	Wa T9	U 4	No	Tim 53200H	SF	H	5.67	35.9	5½x2x⅜	C
50		D-2	2-2½	1485	162	175	11500	4600	B6.50/20	DB6.50/20	Lyc SB	6-3¾x4½	Wa T9	U 4	No	Tim 54200H	SF	R	5.83	37.9	7x3x¼	C
51		E-2	2½-3	2005	162	190	13000	5375	P32x6	DP32x6	Lyc ASD	6-3¾x4½	Fu Mlu-Bb	U 4	No	Tim 56200H	SF	R	7.4	47.0	7x3x¼	C
52		F-3	3½-4	2420	174	198	16000	6240	P34x7	DP34x7	Lyc ASD	6-3¾x4½	Fu MGU14	U 4	No	Tim 58200H	SF	R	7.8	50.6	8x3x¼	C
53		H-4	4-5	3285	179	206	19500	7840	B9.75/20	DP9.75/20	Lcy TS	6-3½x5	Fu MRU	U 4	No	Tim 75720H	2F	R	8.15	54.0	8x3x¼	C
54		M-3	5-6	4640	174	198	23000	8490	B10.50/20	DB10.50/20	Wau 6SRL	6-4⅝x5½	Fu VUOG	U 5	No	Tim 76733H	2F	R	8.85	65.5	9½x3½x⅜	C
55		35-4	7-8	6570	174	198	30000	9700	B10.50/24	DB10.50/24	Wau 6-125	6-4⅝x5½	Fu MHU	U 4	No	Tim 78720W	2F	R	9.58	92.9	9½x3½x⅜	C
56	Maccar	100	1½-2	1330	151	181	10000	4165	B6.50/20	DB6.50/20	Bud H260	6-3⅝x4½	Wa T9	U 4	No	Tim 53200H	BF	H	5.6	36.3	7½x3¼x¼	T
57		40A	2½-4	2400	155	183	15000	5350	B7.50/20	DB7.50/20	Bud H298	6-3¾x4½	BL 314	U 4	No	Tim 56200H	BF	R	6.16	40.6	8x3x¼	T
58		180	3-5	3500	181	213	18000	7400	B9.00/20	DB9.00/20	Bud K393	6-4¼x4¾	BL 554	U 4	No	Wis 8787L	2F	R	6.4	46.6	9x3x¼	T
59		60A	4-6	4500	183	207	22000	7300	B9.75/20	DB9.75/20	Bud BA6	6-4½x5½	BL 554	U 4	No	Tim 65720H	WF	R	6.8	49.5	8x3x¼	T
60		66A	4-6	5500	184	235	22000	8200	B9.75/20	DB9.75/20	Her YXC3	6-4⅝x4¾	BL 615	A 5	No	Tim 65720W	WF	R	6.8	44.5	12x3x¼	T
61		220H	4-6	4500	181	230	22000	8750	B9.75/20	DB9.75/20	Wau 6SRK	6-4⅝x5½	BL 615	A 5	No	Tim 65720H	WF	R	6.8	55.9	9x3x¼	T
62		220W	4-6	5000	180	230	22000	8750	B9.75/20	DB9.75/20	Wau 6SRK	6-4⅝x5½	BL 615	A 5	No	Tim 65720W	WF	R	6.8	55.9	9x3x¼	T
63		86A	5-8	5950	184	235	30000	9500	B10.50/20	DB10.50/20	Wau 6SRK	6-4⅝x5½	BL 615	A 5	No	Tim 76720W	WF	R	7.6	62.5	12x3x⅜	T
64	Mack	BL	1-2	2500	138	192	9500	4050	B6.00/20	DB6.00/20	Own BL	6-3¼x5	Own BG	U 4	No	Tim52000B2	SF	H	5.66	27.9	7x3x⅜	T
65		BG	1½-3	3000	138	192	13600	4800	P32x6	DP32x6	Own BG	6-3⅝x5	Own BG	U 4	No	Own BG	SF	H	5.44	26.8	7x3x⅜	T
66		BF	2½-4	4200	156	198	17800	6600	B8.25/20	DB8.25/20	Own BG	6-3⅝x5	Own BG	U 4	No	Own AB	2F	H	7.01	33.9	7½x3x⅜	T
67		AB	3-5	4000	147	219	20500	6450	P34x7	DP34x7	Own AB	4-4¼x5	Own AB	U 4	No	Own AB	CD	R	7.72	37.4	8x2¼x¼	T
68		AB	3-5	4200	147	219	20500	6700	P34x7	DP34x7	Own AB	4-4¼x5	Own AB	U 4	No	Own AB	2F	H	7.58	36.7	8x2¼x¼	T
69		AB	3-5	4150	147	219	20500	6450	P34x7	DP34x7	Own BG	6-3⅝x5	Own AB	U 4	No	Own AB	CD	R	7.72	37.4	8x2¼x¼	T
70		AB	3-5	4500	147	219	20500	6700	P34x7	DP34x7	Own BG	6-3⅝x5	Own AB	U 4	No	Own AB	2F	H	7.58	36.7	8x2¼x¼	T
71		BM	3-5	4700	157	217	22000	7500	B9.00/20	DB9.00/20	Own BC	6-4x5½	Own BC	U 4	No	Own AB	2F	H	7.01	40.9	7½x3x⅜	T
72		BC	4-6	5250	154	226	23500	7850	P36x8	DP36x8	Own BC	6-4x5½	Own BC	U 4	No	Own BC	2F	H	7.58	44.2	8½x3x⅜	T
73		BC	4-6	5500	154	226	23500	8000	P36x8	DP36x8	Own BC	6-4x5½	Own BC	U 4	No	Own BC	CD	R	7.88	46.0	8½x3x⅜	T
74		BX	4-6	5750	160	214	25200	7900	B9.75/22	DB9.75/22	Own BX	6-4¼x5½	Own BX	U 4	No	Own BX	CD	R	7.88	55.2	9½x3x¼	T
75		BX	4-6	5600	160	214	25100	8050	B9.75/22	DB9.75/22	Own BX	6-4¼x5½	Own BX	U 4	No	Own BX	2F	H	7.01	49.4	9½x3x¼	T
76		BJ	5-8	6450	168	245	31500	9800	B10.50/22	DB10.50/22	Own BK	6-4¼x5½	Own AL	A 4	No	Own AK	2F	H	6.92	36.4	11½x3¼x¼	T
77		BQ	5-8	6800	191	245	32900	10000	B10.50/22	DB10.50/22	Own BQ	6-4¾x5¾	Own BQ	A 4	No	Own AK	2F	H	6.52	41.9	10½x3x¼	T
78		AK	5-8	5150	162	228	28700	9500	B10.50/24 °	DB10.50/24°	Own AC	4-5x6	Own AC	J 4	No	Own AC	CD	R	7.83	50.5	8½x2¾x¼	C
79		AK	5-8	5250	162	228	28800	9400	B10.50/24 °	DB10.50/24°	Own AC	4-5x6	Own AK	A 4	No	Own AK	2F	H	6.92	55.3	8½x2¾x¼	C
80		AK	5-8	6450	174	240	32900	10400	B10.50/22	DB10.50/22	Own BQ	6-4¼x5¾	Own AC	A 4	No	Own AK	2F	H	6.92	44.3	8½x3x⅜	C
81		BX-S	7½	6250	207	225	26000	9200	B9.75/24	DB9.75/24	Own BX	6-4¼x5½	Own B	U 4	No	Own BX	2F	H	7.41	53.1	9½x3x¼	T
82		AC Light	5-8	4950	168	240	28300	9200	B10.50/24 °	DB10.50/24°	Own AC	4-5x6	Own AC	J 4	No	Own AC	CD	R	8.46	54.4	8x3x⅜	C
83		AC Medium	6-9	5500	168	240	32100	9800	S36x6	DS40x6	Own AC	4-5x6	Own AC	J 4	No	Own AC	CD	R	7.75	49.8	8x3x⅜	C
84		AC Heavy	7-10	6000	168	240	36800	10150	S36x7	DS40x7	Own AC	4-5x6	Own AC	J 4	No	Own AC	CD	R	8.95	57.4	8x3x⅜	C
85		AC	6-9	6450	174	240	28000	11400	B10.50/24	DB10.50/24	Own BQ	6-4¾x5¾	Own AC	A 4	No	Own AC	CD	R	8.4	53.9	8½x3x⅜	C
86		AP	7½-10	8500	191	191	36900	11700	S36x7	DS40x8	Own AP	6-5x6	Own AP	J 4	No	Own AP	CD	R	8.31	53.3	8x3x⅜	C
87	Mar.-Herr.	TL-27	2-2½	3785	120	135	12000	5500	B7.50/20	DB7.50/20	Her JXC	6-3¾x4¼	BL328	U4	No	Own Tim	SF	H	Opt.	Opt	6x2½x¼	C
88	(All 4 Wh.Dr.)	TL-28	2½-3	4285	158	188	15200	7250	B8.25/20	DB8.25/20	Her WXC	6-4x4½	BL 328	U4	No	Own Wis	2F	H	Opt.	Opt	6x2¾x¼	C
89		TL-29	3-3½	4950	158	188	17200	7700	B8.25/22	DB8.25/22	Her WXC	6-4x4½	Fu MGU	U4	A 2	Own Wis	2F	H	Opt	Opt	6x2¾x¼	P
90		TL-30	3½-4	5485	158	188	19370	8370	B9.00/20	DB9.00/20	Her WXC3	6-4¼x4½	Fu MGU	U4	A 2	Own Wis	2F	H	Opt	Opt	6x2¾x¼	P
91		TH-300	3½-4	6285	163	193	20300	9300	B9.75/20	DB9.75/20	Her YXC	6-4⅝x4¾	Fu JVUOG	U5	A 2	Own Wis	2F	H	Opt	Opt	8½x3x⅜	P
92		TH-310	4-5	6785	163	193	22620	9620	B9.75/20	DB9.75/20	Her YXC3	6-4⅝x4¾	Fu VUOG	U5	A 2	Own Wis	2F	H	Opt	Opt	8½x3x⅜	P
93		TH-310A	5-6	7795	163	193	25120	10120	B9.75/22	DB9.75/22	Her RXC	6-4½x5¼	Fu VUOG	U5	A 2	Own Wis	2F	H	Opt	Opt	8½x3x⅜	P
94		TH-320	5-7	10500	198	228	31200	14200	B10.50/24	DB10.50/24	Her RXB	6-4½x5¼	BL 724	U 4	A 3	Own Wis	2F	H	Opt	Opt	10½x3x⅜	P
95		TH-330	7½	12500	198	228	33920	14920	B11.25/24	DB11.25/24	Her HXD	6-5½x6	BL 734	U4	A 3	Own Wis	2F	H	Opt	Opt	10½x3x⅜	P
96	Moreland	RR-10	1½	1195	159	Op	10000	4195	B6.50/20	DB6.50/20	Her JXC	6-3¾x4¼	BL 224	U 4	No	Tim 53200H	SF	R	5.66	35.0	7½x2½x¼	T
97		RR-12	2	1400	159	Op	12000	4585	P32x6	DP32x6	Her JXC	6-3¾x4¼	BL 224	U 4	No	Tim 54300H	SF	R	5.83	36.1	7½x2½x¼	T
98		B13, 15	2½-3½	2850	184	Op	15000	5815	B8.25/20	DB8.25/20	Her WXC	6-4x4½	BL 334	U 4	No	Tim 56200H	SF	R	6.17	40.7	9½x3½x¼	T
99		B16, 18	4-4½	3025	184	Op	18000	6195	B9.00/20	DB9.00/20	Her WXC	6-4x4½	BL 334	U 4	No	Tim 58200H	SF	R	6.13	40.5	9½x3½x¼	T
100		E16, 18	4-4½	3300	184	Op	18000	6460	B9.00/20	DB9.00/20	Her WXC3	6-4¼x4½	BL 334	U 4	No	Tim 58200H	SF	R	6.13	32.9	9½x3½x¼	T
101		E19, 21	5-5½	3800	184	Op	21000	7155	B9.75/20	DB9.75/20	Her WXC3	6-4¼x4½	BL 524	U 4	No	Tim 65720H	WF	R	7.25	38.	9½x3½x⅜	T
102		H-26	5½-6½	5300	196	Op	26000	8700	B9.75/20	DB9.75/20	Her RXB	6-4½x5¼	BL 5212	A 12	No	Tim66720TW	WF	R	8.20	59.7	9½x2¼x⅜	T
103	Oshkosh	JSW	1½-2	2650	123	Op	10660	4880	B7.00/20	DB7.00/20	Her WXC	6-4x4½	BL 224	U 4	No	Own J8B	SF	H	6.19	40.1	6x3½x¼	T
104	(All 4Wh. Dr)	JSB	1½-2	2490	149	Op	10750	4760	B7.00/20	DB7.00/20	Her JXC	6-3¾x4¼	BL 51-4	U 4	No	Own JSB	SF	H	6.19	40.1	6x3½x¼	T
105		LB	2-2½	3750	146	165	13900	6700	B9.00/20	B9.00/20	Her JXC	6-3¾x4¼	BL 51-4	U 4	No	Own LB	2F	H	7.3	39.0	7x3x¼	T
106		LC	2½-3	4000	146	165	15150	6950	B9.00/20	B9.00/20	Her WXC	6-4x4½	BL 55-4	U 4	No	Own LC	2F	H	7.3	53.1	7x3x¼	T
107		H2A	3½	4675	146	165	16550	7550	B9.75/22	B9.75/22	Her WXC3	6-4¼x4½	BL 55-7	A 7	No	Own H2A	2F	H	8.94	84.9	7x3x¼	T
108		H2B	3½-4	4890	146	165	18800	8700	B10.50/22	B10.50/22	Her YXC	6-4½x4¾	BL 615	U 5	No	Own H2B	2F	H	8.94	73.4	7x3x¼	L
109		H2C	4-5	5165	146	165	22000	9000	B11.25/20	B11.25/20	Her RXB	6-4½x5¼	BL 615	U 5	No	Own H2C	2F	H	9.6	78.9	7x3x½	L
110		Y2D	4-5½	5490	146	165	22250	9450	B11.25/20	B11.25/20	Her RXB	6-4½x5¼	BL 70-7	A 7	No	Own Y2D	2F	H	9.6	91.2	7x3x½	L
111		FHX	5-7	6145	146	165	26350	10350	B12 00/20	B12.00/20	Her RXC	6-4½x5¼	BL 70-7	A 7	No	Own FHX	2F	H	9.6	90.2	8x3x½	L
112		F2A	5-7½	6775	146	165	28400	11400	B12.75/20	B12.75/20	Her RXC	6-4½x5¼	BL 70-7	A 7	No	Own F2A	2F	H	9.1	85.5	8x3x½	L
113		GB	7½	***	156	170	30000	14000	B12.75/20	B12.75/20	Her HXB	6-5x6	BL 744	U 4	A 3	Wis Own	2F	H	5.0	96.3	10x3¼x½	L
114		G	7½-10	***	156	170	37000	14250	B13.50/20	B13.50/20	Her HXC	6-5¼x6	BL 744	U 4	A 3	Wis Own	2F	H	5.0	96.3	10x3¼x½	L
115	Pierce-Arrow	138385	2-2½	2500	160	200	13000	5750	B8.25/20	DB8.25/20	Own E	8-3½x5	Co RU48L	U 4	No	Tim 56200	SF	R	5.28	32.6	7⅝x3½x⅜	C
116		15T298	3-3½	1950	150	200	15000	5725	B8.25/20	DB8.25/20	Her WXB	6-3¾x4¼	Cl B102	U 4	Op	Tim 56200	SF	R	6.16	40.2	7⅝x3½x⅜	C
117		17T361	3-4	2350	150	200	17000	5725	B39.00/20	DB8.25/20	Her WXC2	6-4½x4½	Co RU48L	U 4	Op	Tim 58200	SF	R	6.83	42	7⅝x3½x⅜	C
118		18W361	3½-4½	3000	150	200	18000	6660	B9.00/20	DB9.00/20	Her WXC2 Spe	6-4½x4½	Co RU48L	U 4	Op	Tim 65720	WF	R	6.8	42	8½x3½x⅜	C
119		19R479	3½-4½	3600	150	200	19000	7850	B9.00/20	DB9.00/20	Her YXC3	6-4⅝x4¾	Co TNU	U 4	Op	Tim 65720	WF	R	6.8	36	8½x3½x⅜	C
120		21W361	4½-5½	3100	150	190	21000	6800	B9.75/20	DB9.75/20	Her WXC2 Spe	6-4½x4½	Co RU48L	U 4	Op	Tim 65720	WF	R	6.8	42	8½x3½x⅜	C
121		22R479	4½-5½	3700	150	200	22000	7970	B9.75/20	DB9.75/20	Her YXC3	6-4⅝x4¾	Co TNU	U 4	Op	Tim 65720	WF	R	6.8	36.0	8½x3½x⅜	C
122		22X479	4½-5½	3900	200	240	22000	8095	B9.75/20	DB9.75/20	Her YXC3	6-4⅝x4¾	Co TNU	U 4	Op	Tim 65720	WF	R	6.8	36.	9½x3½x⅜	C
123	(Cont'd)	24X479	5-6	4150	150	200	24000	9250	B10.50/20	DB10.50/20	Her YXC3	6-4⅝x4¾	Co TNU	U 4	Op	Tim 66720	WF	R	7.6	40.2	9½x3½x⅜	C

Line Number	ENGINE DETAILS: Piston Displacement	Compression Ratio	Torque lb. ft.	N.A.C.C. Rated H.P.	Max. Brake H.P. at R.P.M. Given	Valve Arrangement	Camshaft Drive	Piston Material	MAIN BEARINGS: Number and Diameter	MAIN BEARINGS: Length	Oiling System Type	Governor Make	FUEL SYST.: Carburetors Make	FUEL SYST.: Fuel Feed	ELECTRICAL: Ignition System Make	ELECTRICAL: Generator, Starter Make	Clutch Type and Make	Radiator Make	Universals Make	FRONT AXLE: Make and Model	Steering Gear Make	BRAKES: SERVICE: Make, Location Type, Operation	BRAKES: SERVICE: Lining Area	BRAKES: SERVICE: Drum Material	BRAKES: Hand Type, Location	BODY MOUNTING DATA: Cab to Rear of Frame	BODY MOUNTING DATA: Cab to Rear Axle	BODY MOUNTING DATA: Width of Frame	SPRINGS: Front	SPRINGS: Rear	SPRINGS: Auxiliary Type
1	428	4.8	280	45.9	107–2600	L	G	B	7–3	11½	PC	Pe	Zen	M	AL	AL	D.Fu	Yo	Blo	Shu 610-103	Ros	W IM	360	G	TD	111	86½	35	41 ¼ x2 ½	48 ½ x3 ½	½
2	525	4.8	336	48.6	111–2200	L	G	B	7–3	11½	PC	Pe	Zen	M	AL	AL	D.Fu	Yo	Blo	Shu 633-11	Ros	W41A	550	PG	CD	96½	64	31½	41 ¼ x2 ½	54 ¼ x3	¼
3	525	4.8	336	48.6	111–2200	L	G	B	7–3	11½	PC	Pe	Zen	M	AL	AL	D.Fu	Yo	Blo	Shu 610	Ros	W2IM	360	G	TD	119	86½	35	41 ¼ x2	48 ½ x3	½
4	263	5.0	160	31.5	68–2800	L	G	C	7–2½	10¼	PC	Op	Str	M	AL	AL	P.BL	Yo	Spi	Tim 30020H	Ros	L4IH	249	G	TX	92	56	34	37x2 ¼	54x2 ½	N
5	282	5.3	176	33.7	73–2800	L	G	A	7–2½	10¼	PC	Op	Str	M	AL	AL	P.BL	Yo	Spi	Tim 31020	Ros	L4IH	353	G	TX	92	56	34	37x2 ¼	54x2 ½	N
6	282	5.3	176	33.7	73–2800	L	G	A	7–2½	10¼	PC	Op	Str	M	AL	AL	P.BL	Yo	Spi	Tim 31020	Ros	L4IH	353	G	TX	92	56	34	37x2 ¼	54x2 ½	½
7	339	4.7	210	38.4	75–2400	L	G	A	7–2⅝	13¼	PC	Op	Str	M	AL	AL	P.BL	Yo	Spi	Shu 5572	Ros	L4IHV	356	G	CD	108	69⅜	34	39 ½ x2 ½	54x3	½
8	428	4.4	283	45.9	94–2200	L	G	A	7–3	14	PC	Ha	Str	M	AL	AL	P.BL	Yo	Spi	Shu 15582	Ros	L4IHV	398	G	CD	142	83	34 ½	40x2 ½	54x3	½
9	428	4.4	283	45.9	94–2200	L	G	A	7–3	14	PC	Ha	Str	M	AL	AL	P.BL	Yo	Spi	Shu 15582	Ros	L4IHV	398	G	CD	142	83	34 ½	40x2 ½	54x3	½
10	428	4.4	283	45.9	94–2200	L	G	A	7–3	14	PC	Ha	Str	M	AL	AL	P.BL	Yo	Spi	Shu 15582	Ros	L4IHV	398	G	CD	142	83	34 ½	40x2 ½	54x3	½
11	501	4.9	330	48.6	110–2200	L	G	A	7–3	12½	PC	Ha	Str	M	AL	AL	P.BL	Yo	Spi	Shu 15592B	Ros	L4IHV	546	G	CD	142	83	34 ½	40x2 ½	54x3	½
12	529	4.9	350	51.3	115–2200	L	G	A	7–3	12½	PC	Ha	Str	M	AL	AL	P.BL	Yo	Spi	Shu 15592B	Ros	L4IHV	546	G	CD	142	83	34 ½	40x2 ½	54x3	½
13	762	17.	420	57.0	125–1800	H	G	N	7–3½	17½	CC	En	No	M	CI	LN	dpBL	Yo	Spi	Shu 1633W	Ros	Ws4IA	560	G	CD	144	90	34	40x3	54x3	½
14	213	5.0	131	26.3	66–3400	L	C	C	4–2⅝	6¼	FP	No	Tfl	M	AL	AL	B-W	Mo	Spi	Own D-50	Own	B4IM	156	P	2I	54 ¼	27 ¼	Var	36 ½ x1 ¾	51x1 ¾	N
15	186	4.6	124	21.	39–2400	L	G	C	3–2	6¼	FP	No	Zen	V	DR	DR	P.MM	Mo	MM	Own 104	Ros	B4IM	217	Pa	TX	66 ¼	35 ½	32 ½	40x2	46x2 ½	¼
16	186	4.6	124	21.	39–2400	L	G	C	3–2	6¼	FP	No	Zen	V	DR	DR	P.MM	Mo	MM	Own 101	Ros	B4IM	212	P	2I	93 ⅝	53 ⅜	32 ½	40x2	46x2 ½	½
17	186	4.6	124	21.	39–2400	L	G	C	3–2	6¼	FP	No	Zen	V	DR	DR	P.MM	Mo	MM	Own 101	Ros	B4IM	212	P	2I	93 ⅝	53 ⅜	32 ½	40x2	46x2 ½	N
18	224	4.7	138	25.3	54–2700	L	G	A	4–2⅜	7½	PC	No	Zen	M	DR	DR	P.Ro	Mo	MM	Own 105	Ros	B4IM	287	P	2I	93 ⅝	53 ⅜	32 ¼	40x2	46x2 ½	½
19	224	4.7	138	25.3	54–2700	L	G	A	4–2⅜	7½	PC	No	Zen	M	DR	DR	P.Ro	Mo	MM	Own 200	Ros	B4IM	302	P	2I	93 ⅝	53 ⅜	32 ¼	40x2 ¼	46x2 ½	½
20	224	4.7	138	25.3	54–2700	L	G	A	4–2⅜	7½	PC	No	Zen	V	DR	DR	P.Ow	Mo	MM	Own 200	Ros	B4IM	295	Pa	2I	98 ⅛	55 ⅝	32	40x2 ¼	52x2 ½	¼
21	223	5.4	154	28.3	63–3200	H	G	C	4–2⅜	6 ⅜	FP	No	Zen	M	DR	DR	P.Ow	Mo	MM	Own 108	Ros	B4IM	303	Pa	2I	106 ⅜	62 ⅝	34	40x2	54x3	¼
22	279	4.6	176	31.5	67–2600	H	G	C	7–2½	13 ⅜	FP	Ha	Zen	M	DR	DR	P.Ow	Mo	MM	Own 251	Ros	B4IM	378	Pa	2I	104	61 ½	34	42x3	54x3	¼
23	279	4.6	176	31.5	67–2600	H	G	C	7–2½	13 ⅜	FP	Ha	Zen	M	DR	DR	P.Ow	Mo	MM	Own 300	Ros	B4IM	430	Pa	2I	115	72 ½	34	42x3	56x3	¼
24	279	4.6	176	31.5	67–2600	H	G	C	7–2½	13 ½	FP	Ha	Zen	M	DR	DR	P.Ow	Mo	MM	Own 300	Ros	B4IM	430	Pa	2I	115	72 ½	34	42x3	56x3	¼
25	312	4.0	200	28.9	59–1800	H	C	A	3–2¾	7⅜	FP	HS	Zen	V	RB	DR	P.Ow	Ow	Ow	Own 400	Own	BO4IM	710	Pa	2I	106 ½	73 ¼	34	41 ½ x3	56x3 ½	¼
26	390	3.8	240	36.1	69–1800	H	C	A	3–3	7⅜	FP	HS	Zen	V	RB	DR	P.Ow	Ow	Ow	Own 500	Own	BO4IM	794	Pa	2I	120	81 ½	34	44x3	58x4	¼
27	525	4.5	315	48.6	98–1800	H	G	C	7–3¼	17¼	FP	Ha	Zen	M	DR	DR	P.Ro	Mo	MM	Own 503	Ros	B04IMV	729	Pa	TD	106	72	34	48x3	56x3	N
28	648	4.4	398	60.0	114–1800	H	G	C	7–3¼	17¼	FP	Ha	Zen	M	DR	DR	P.Ro	Mo	MM	Own 503	Ros	B04IMV	729	Pa	TD	106	72	34	48x3	56x3	N
29	228	4.7	150	27.3	50–2400	L	G	A	7–2½	10¼	FP	No	Zen	M	DR	DR	P.BL	Pe	Spi	Cla F208	Ros	L4IH	222	p	TX	88	60	34 ½	40x2 ¼	52x3	N
30	282	4.7	176	33.7	73–2700	L	G	A	7–2½	10¼	FP	No	Zen	M	DR	DR	P.BL	Pe	Spi	Tim 31000H	Ros	L4IH	335	a	TX	108	60	31½	38x2 ¼	52x2 ½	N
31	298	4.7	200	33.7	80–2800	L	G	A	7–3	9⅞	CC	No	Zen	M	DR	DR	P.BL	Pe	Spi	Tim 31000H	Ros	L4IH	335	a	FD	96	60	34 ½	39x2 ½	52x3	½
32	282	4.7	176	33.7	73–2700	L	G	A	7–2½	10¼	FP	No	Zen	M	DR	DR	P.BL	Pe	Spi	Tim 31000H	Ros	L4IH	335	a	TX	108	60	31½	38x2 ¼	52x2 ½	½
33	339	4.4	212	38.4	76–2400	L	C	C	7–2⅝	13¼	FP	No	Zen	M	DR	DR	P.BL	Pe	Spi	Tim 33000H	Ros	L4IH	335	a	FD	110	72	31½	40x2 ½	52x3	½
34	282	4.7	176	33.7	73–2700	L	G	A	7–2½	10¼	FP	No	Zen	M	DR	DR	P.BL	Pe	Spi	Tim 31000H	Ros	L4IH	394	a	TX	108	60	31½	38x2 ¼	52x3	½
35	393	4.9	260	42.1	103–2600	L	G	C	7–3	11½	FP	No	Zen	M	DR	DR	P.BL	Pe	Spi	Tim 33000H	Ros	L4IHV	394	a	FD	120	72	31½	40x2 ½	52x3	½
36	393	4.9	260	42.1	103–2600	L	G	C	7–3	11½	FP	No	Zen	M	DR	DR	P.BL	Pe	Spi	Tim 35100H	Ros	L4IHV	455	a	FD	120	72	33¾	42x2 ½	56x3 ½	½
37	377	4.9	258	38.4	92–2300	H	C	A	4–2⅞	11½	FP	No	Zen	M	DR	DR	P.BL	Pe	Spi	Tim 35100H	Ros	L4IHV	455	a	FD	120	72	33¾	42x2 ½	56x3 ½	½
38	453	4.8	300	48.6	98–2200	L	G	A	7–3	14	CC	Ha	Zen	M	DR	DR	P.BL	Pe	Spi	Tim 35100H	Ros	L4IHV	602	a	FD	132	72	33¾	42x2 ½	56x3 ½	½
39	501	4.9	330	48.6	110–2200	L	G	A	7–3	12½	CC	Ha	Zen	M	DR	DR	P.BL	Pe	Spi	Tim 36020N	Ros	Ws2ImV	407	a	FD	132	84	33¾	42x3	56x4	½
40	468	4.4	322	43.3	125–2400	H	C	A	4–2¾	10⅜	FP	No	Zen	M	DR	DR	P.BL	Pe	Spi	Tim 36020N	Ros	Ws2ImV	407	a	FD	132	84	33¾	42x3	56x4	½
41	572	4.3	358	48.6	114–1900	L	G	C	4–3	10 ⅛	CC	Bu	Zen	M	DR	DR	P.BL	Pe	Spi	Tim 36020N	Ros	Ws2ImV	407	a	FD	132	84	33¾	42x3	56x4	½
42	707	4.4	506	60.0	170–2000	H	C	A	7–3¼	11 ¼	FP	HS	Zen	M	DR	DR	P.BL	Pe	Spi	Tim 36020N	Ros	Ws2ImV	407	a	FD	132	84	33¾	42x3	56x4	½
43	214	4.9	137	27.3	61–3000	L	C	C	7–2½	8¼	FP	No	Str	V	DR	DR	D.BL	Mo	Spi	Tim 30000H	Ros	L4IH	308	G	TX	101	64	34	38x2 ¼	52x2 ½	½
44	248	4.4	160	27.4	70–3200	L	C	C	7–2⅜	10 ⅜	PC	No	Str	M	DR	DR	D.BL	Ow	Spi	Tim 31000H	Ros	L4IH	452	G	TX	126	76	34	38x2 ½	52x2 ½	½
45	311	4.2	196	33.8	73–2400	H	C	C	7–2¾	13	PC	No	Str	M	DR	DR	D.BL	Ow	Spi	Tim 31000H	Ros	L4IH	354	G	F	166	76	34	38x2 ½	52x3	½
46	339	4.2	212	38.4	80–2400	H	C	C	7–2¾	13 ⅜	FP	No	Str	V	DR	DR	D.BL	Ow	Spi	Tim 33020H	Ros	L4IH	648	G	TD	172	104	34	38x2 ½	52x3	¼
47	381	4.2	237	40.8	89–2400	H	C	C	7–2¾	13 ⅜	CC	No	Str	M	DR	DR	D.BL	Ow	Spi	Tim 35020H	Ros	L4IHV	676	G	FD	170	108	34	38x2 ½	52x3	½
48	427	4.2	270	45.9	102–2400	H	C	C	7–2¾	13 ⅜	FP	No	Str	M	DR	DR	D.BL	Ow	Spi	Tim 26450	Ros	Ws4IA	848	G	FD	180	130	38	44x2 ½	52x3	½
49	224	4.7	145	25.3	61–2800	L	G	C	4–2⅜	8 ⅜	PC	No	Zen	M	AL	AL	P.BB	Pe	Spi	Tim 30000H	Ros	L4IH	287	Da	TX	110¾	67½	31½	38x2	52 ½ x2 ½	½
50	242	5.0	160	27.3	65–2800	L	G	C	4–2⅜	8 ⅜	PC	No	Zen	M	AL	AL	P.BB	Pe	Spi	Tim 31000H	Ros	L4IH	271	Da	TX	143¾	79½	32	38x2	52 ½ x2 ½	½
51	299	4.9	195	33.5	82–2600	L	G	C	4–2¾	10	PC	Ha	Zen	M	AL	AL	P.BB	Pe	Spi	Tim 31000H	Ros	L4IHV	327	Da	TX	120	78¾	32	38x2	57 ½ x2	½
52	299	4.9	195	33.5	82–2600	L	G	C	4–2¾	10	PC	Ha	Zen	M	AL	AL	D.Fu	Pe	Spi	Tim 33020H	Ros	L4IHV	367	Da	FD	140 ¼	93	32	39x2 ½	60x3 ½	½
53	354	4.3	228	36.2	86–2300	L	G	C	4–2¾	10	FP	Ha	Zen	M	AL	AL	D.Fu	Pe	Spi	Tim 33000H	Ros	L4IHV	458	Da	FD	144	75	32	39x2 ½	60x3	½
54	462	4.1	310	46.	97–2000	L	G	C	7–3	13½	PC	Wa	Zen	M	AL	AL	D.Fu	Pe	Spi	Tim 35000H	Ros	L4IHV	468	Da	FD	168	88	32 ½	44x3	60x3 ½	½
55	462	4.6	324	46.	125–2400	L	G	C	7–3	13½	PC	Wa	Zen	M	AL	AL	D.Fu	Ow	Spi	Tim 27450W	Ros	Ws4IA	690	Da	FD	168	81¼	34	44x3	60x3 ½	N
56	260	5.2	170	29.4	70–2800	L	G	C	7–3	9⅞	FP	Ha	Zen	M	DR	DR	P.BB	Pe	Spi	Tim 30000H	Ros	L4IH	247	a	TX	95 ⅜	63 ⅜	32	40 ½ x2 ½	54x2 ½	½
57	298	5.3	200	33.7	80–2600	L	G	C	7–3	9⅞	FP	Ha	Str	M	DR	DR	P.BL	Pe	Spi	Tim 31000H	Ros	L4IHV	343	a	TD	114	72 ¼	32	42x2 ½	54x2 ½	½
58	393	4.8	260	42.	101–2400	L	G	C	7–3	11 ½	FP	Ha	Str	M	DR	DR	P.BL	Ch	Spi	Tim 35000H	Ros	L4IHV	412	a	TD	143 ⅞	91 ⅞	33	42x3	58 ½ x3	½
59	411	5.3	272	40.8	100–2000	L	G	C	4–2½	9⅞	FP	Ha	Str	M	DR	DR	D.BL	Pe	Spi	Tim 35020H	Ros	L4IHV	527	a	TD	144	96¾	32	42x2 ½	54x3	½
60	478	4.7	318	51.3	100–2000	L	G	A	7–3	15	PC	Ha	Zen	M	DR	DR	D.BL	Ch	Spi	Tim26450TW	Ros	Ws4IA	618	a	TD	144	92 ⅜	33	42x3	58 ½ x3	½
61	517	4.5	332	51.3	107–2000	L	G	A	7–3	13¾	FP	Wa	Str	M	DR	DR	P.BL	Ch	Spi	Tim 35000H	Ros	L4IHV	527	a	TD	143 ⅞	91 ⅞	33	42x3	58 ½ x3	½
62	517	4.5	332	51.3	107–2000	L	G	A	7–3	13¾	FP	Wa	Str	M	DR	DR	P.BL	Ch	Spi	Tim35100TW	Ros	Ws4IA	618	a	TD	143 ⅞	91 ⅞	33	42x3	58 ½ x3	½
63	517	4.5	332	51.3	107–2000	L	G	A	7–3	13¾	FP	Wa	Str	M	DR	DR	P.BL	Ch	Spi	Tim26450TW	Ros	Ws4IA	623	a	TD	144	92 ⅜	33 ½	42x3	58 ½ x3	½
64	248	5.1	145	25.4	61–2600	L	G	C	7–2⅜	11 ⅜	FP	Ha	Str	M	NE	NE	D.Ow	Ow	Spi	Own BL	Ce	L4IH	302	P	FX	109	64 ½	33 ⅞	40 ¼ x2 ½	54 ½ x2 ½	N
65	309	4.7	183	31.5	75–2500	L	G	C	7–2⅜	11 ⅜	FP	Ha	Str	M	NE	NE	P.Ow	Ow	Spi	Own BG	Own	O4IMV	427	a	FX	96	54 ½	33 ⅞	42x2 ¼	54x3	N
66	309	4.7	183	31.5	75–2500	L	G	C	7–2⅜	11 ⅜	FP	Ha	Str	M	NE	NE	P.Ow	Ow	Spi	Own BG	Ros	O4IMV	427	a	FD	132	84 ½	33 ⅞	44x2 ¼	54x3	N
67	283	4.4	176	28.9	63–2100	L	G	C	3–3	8 ⅜	PS	Ow	Str	G	NE	NE	D.Ow	Ow	Spi	Own AB	Own	O4IMV	471	a	FX	120	73	33 ¼	42 ¼ x3	48x3	N
68	283	4.4	176	28.9	63–2100	L	G	C	3–3	8 ⅜	PS	Ow	Str	G	NE	NE	D.Ow	Ow	Spi	Own AB	Own	O4IMV	471	a	FX	120	73	33 ¼	42 ¼ x3	56 ½ x3 ½	N
69	309	4.7	183	31.5	75–2500	L	G	C	7–2⅜	11 ⅜	FP	Ha	Str	M	NE	NE	D.Ow	Ow	Spi	Own AB	Own	O4IMV	471	a	FX	120	73	33 ¼	42 ¼ x3	48x3	N
70	309	4.7	183	31.5	75–2500	L	G	C	7–2⅜	11 ⅜	FP	Ha	Str	M	NE	NE	D.Ow	Ow	Spi	Own AB	Own	O4IMV	471	a	FX	120	73	33 ¼	42 ¼ x3	56 ½ x3 ½	N
71	414	4.5	261	38.4	94–2400	L	G	C	7–3	13 ⅜	FP	Ha	Str	M	RB	NE	P.Ow	Ow	Spi	Own BM	Ros	O4IMV	427	a	FX	156	108 ½	33 ¼	44x2 ½	54x3 ½	½
72	414	4.5	261	38.4	94–2400	L	G	C	7–3	13 ⅜	FP	Ha	Str	M	RB	NE	P.Ow	Ow	Spi	Own BC	Own	O4IMV	610	a	FX	120	73	33 ¼	43 ¾ x3	56 ½ x3 ½	N
73	414	4.5	261	38.4	94–2400	L	G	C	7–3	13 ⅜	FP	Ha	Str	M	RB	NE	P.Ow	Ow	Spi	Own BC	Own	O4IMV	590	a	JX	120	73	33 ⅝	43 ¾ x3	54x3	N
74	468	4.7	292	43.4	104–2300	L	G	C	7–3	13 ⅜	FP	Ha	Str	M	NE	NE	P.Ow	Ow	Spi	Own BC	Ros	O4IMV	619	a	JX	144	91	33 ⅜	53 ⅜ x3	54x3	N
75	468	4.7	292	43.4	104–2300	L	G	C	7–3	13 ⅜	FP	Ha	Str	M	NE	NE	P.Ow	Ow	Spi	Own BC	Ros	O4IMV	619	a	FX	144	91	33 ⅜	53 ⅜ x3	56 ½ x3 ½	N
76	525	4.8	350	48.6	125–2300	L	G	C	4–3½	11 ⅜	PS	Ow	Str	M	RB	LN	P.Ow	Ow	Cle	Own AK	Ros	O4IMV	618	a	FD	120	79	33 ¼	50x3 ¼	59 ⅜ x4	¼
77	611	5.0	398	54.2	128–2200	L	G	C	4–3½	11 ⅜	PS	Ow	Str	M	RB	LN	P.Ow	Ow	Spi	Own BQ	Ros	O4IMV	618	a	FX	150	102	33 ¼	50x3 ¼	58 ⅜ x3 ½	½
78	471	3.9	320	40.0	75–1800	L	G	C	3–3	10 ⅜	PS	Ow	Str	G	RB	NS	P.Ow	Ow	Spi	Own AK	Own	O4IMV	492	a	JX	132	93 ⅜	37 ½	48x3 ½	52x4	½
79	471	3.9	320	40.0	75–1800	L	G	C	3–3	10 ⅜	PS	Ow	Str	G	RB	NS	P.Ow	Ow	Spi	Own AK	Own	O4IMV	492	a	FX	132	93 ⅜	37 ½	48x3 ½	56x4	½
80	611	5.0	398	54.2	128–2200	L	G	C	4–3½	11 ⅜	PS	Ow	Str	M	RB	LN	P.Ow	Ow	Spi	Own AK	Ros	O4IMV	561	a	FD	132	93	37 ⅝	47 ⅜ x3 ½	58 ½ x4	½
81	468	4.7	292	43.4	104–2300	L	G	C	7–3	13 ⅜	FP	Ha	Str	M	NE	NE	P.Ow	Ow	Spi	Own BC	Ros	O4IMV	619	a	FX	212	138	33 ⅜	53 ⅜ x3	56 ½ x3 ½	N
82	471	3.9	320	40.0	75–1800	L	G	C	3–3	10 ⅜	PS	Ow	Str	G	RB	NS	P.Ow	Ow	Spi	Own AC	Own	OJXM	194	C	2I	156	104	37 ½	46x3 ½	52x4	½
83	471	3.9	320	40.0	75–1800	L	G	C	3–3	10 ⅜	PS	Ow	Str	G	RB	NS	P.Ow	Ow	Spi	Own AC	Own	OJXM	194	C	2I	156	104	37 ½	46x3 ½	52x4	½
84	471	3.9	320	40.0	75–1800	L	G	C	3–3	10 ⅜	PS	Ow	Str	G	RB	NS	P.Ow	Ow	Spi	Own AC	Own	OJXM	194	C	2I	156	104	37 ½	46x3 ½	52x4	½
85	611	5.0	398	54.2	128–2200	L	G	C	4–3½	11 ⅜	PS	Ow	Str	M	RB	LN	P.Ow	Ow	Spi	Own AK	Ros	O4IMV	755	C	JX	156	105	37 ½	48x3 ½	52x4	½
86	706	4.8	427	60.0	138–1900	L	G	S	4–3 ⅜	11 ⅜	PS	Ow	Str	G	RB	LN	P.Ow	Ow	Spi	Own AC	Ros	O2IMV	284	C	JX	180	108 ⅛	37 ½	46 ⅜ x3 ½	52x4	½
87	282	5	190	33.7	73–2800	L	G	A	7–2½	10¼	PC	No	Zen	M	DR	DR	P.BL	Yo	Spi	Own 1A	Ros	T2/41H	238	P	FD	Opt	48	34	40x2 ½	50x2 ½	O
88	339	4.7	215	38.4	76–2400	L	G	A	7–2⅝	13¼	PC	Ha	Zen	M	DR	DR	P.BL	Yo	Blo	Own 1	Ros	W2/41H	350	P	FD	Opt	67	34	40x2 ½	50x2 ½	O
89	339	4.7	215	38.4	76–2400	L	G	A	7–2⅝	13¼	PC	Ha	Zen	M	DR	DR	D.Fu	Yo	Blo	Own 1	Ros	W2/41H	350	a	FD	Opt	67	34	40x3	50x3	O
90	383	4.7	265	43.3	92–2400	L	G	A	7–2⅝	13¼	PC	Ha	Zen	M	DR	DR	D.Fu	Yo	Blo	Own 2A	Ros	W2/41H	812	a	FD	Opt	67	34	40x3	50x3	O
91	428	4.4	280	45.9	94–2200	L	G	A	7–3	14	PC	Ha	Zen	M	DR	DR	D.Fu	Yo	Blo	Own 2	Ros	W2/41A	812	a	FD	Opt	72	34	44x3	52x3 ½	O
92	479	4.4	320	51.3	104–2200	L	G	A	7–3	14	PC	Ha	Zen	M	DR	DR	D.Fu	Yo	Blo	Own 2	Ros	W2/41A	918	a	FD	Opt	72	34	44x3	52x3 ½	O
93	529	4.9	350	51.3	115–2200	L	G	A	7–3	12½	PC	Ha	Zen	M	DR	DR	D.Fu	Yo	Blo	Own 3	Ros	W2/41A	918	a	FD	Opt	72	34	44x3	52x3 ½	O
94	707	4.5	455	60.	140–2000	L	G	A	7–3½	17	PC	Ha	Zen	M	DR	DR	dp.BL	Yo	Blo	Own 3A	Ros	Ws2/41A	974	a	2FD	Opt	102	34	52x4	54x4	O
95	855	4.5	550	72.8	180–2000	L	G	A	7–3½	17	PC	Ha	Zen	M	DR	DR	dp.BL	Yo	Blo	Own 4	Ros	Ws2/41A	974	a	2FD	Opt	102	34	52x4	54x4	O
96	282	5.0	176	33.8	73–2800	L	C	C	7–2½	10¼	PC	No	Zen	M	AL	AL	P.BL	Lo	Spi	Tim 30000H	Ros	L4IH	254	a	TD	132	78	34	40x2 ½	54x3	½
97	282	5.0	176	33.8	73–2800	L	C	C	7–2½	10¼	PC	No	Zen	M	AL	AL	P.BL	Lo	Spi	Tim 31000H	Ros	L4IH	364	a	TD	132	78	34	40x2 ½	54x3	½
98	339	4.7	212	38.4	76–2400	L	G	C	7–2⅝	13¼	PC	No	Zen	M	AL	AL	P.BL	Lo	Cle	Tim 33020H	Ros	L4IH	374	a	TD	156	101	34	40x2 ½	54x3	½
99	339	4.7	212	38.4	76–2400	L	G	C	7–2⅝	13¼	PC	No	Zen	M	AL	AL	P.BL	Lo	Cle	Tim 33020H	Ros	L4IH	405	a	TD	156	101	34	40x2 ½	54x3	½
100	383	4.4	262	43.3	92–2400	L	G	A	7–2⅝	13¼	PC	No	Zen	M	AL	AL	P.BL	Lo	Cle	Tim 33020H	Ros	L4IH	405	a	FD	156	99 ⅛	34	41 ½ x2 ½	54x3	½
101	383	4.4	262	43.3	92–2400	L	G	A	7–2⅝	13¼	PC	No	Zen	M	AL	AL	P.BL	Lo	Cle	Tim 35120H	Ros	L4IHV	494	a	FD	156	99 ⅛	34	40x2 ½	54x3 ½	½
102	501	4.9	330	48.6	110–2200	L	G	A	7–3	12½	PC	Mo	Zen	M	AL	AL	P.BL	Lo	Cle	Tim26450TW	Ros	Ws4IA	620	a	FD	168	112¼	34	42x3	58x3 ½	½
103	339	4.7	225	38.4	75–2200	L	G	C	7–2½	13¼	PC	No	Zen	M	AL	AL	P.BL	Ow	Spi	Own JSB	Ha	B4IMV	304	G	TX	77 ½	51	34	42x2 ½	44x2 ½	½
104	282	5.3	176	33.7	72–2800	L	G	C	7–2½	10¼	PC	No	Zen	M	AL	AL	P.BL	Ow	Spi	Own JSB	Ha	B4IMV	304	G	TX	103 ½	77	34	42x2 ½	44x2 ½	½
105	282	5.3	176	33.7	72–2500	L	G	C	7–2½	10¼	PC	Ha	Str	M	RB	LN	D.BL	Mo	Blo	Own LB	Ros	O4XM	142	C	2I	112¼	82⅛	34	44x2 ½	50x3	N
106	339	4.7	212	38.4	76–2000	L	G	C	7–2⅝	13¼	PC	Ha	Str	M	RB	LN	D.BL	Mo	Blo	Own LC	Ros	O4XM	142	G	2I	112¼	82⅞	34	44x2 ½	50x3	½
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Line Number	MAKE AND MODEL	Wheels Driven—6-Wheelers	GENERAL (See Keynote) Tonnage Rating	Chassis Price	Standard Wheelbase	Max. W. B. Furnished	Gross Vehicle Weight	Chassis Wt. (Stripped)	TIRE SIZE Front	Rear	MAJOR UNITS ENGINE Make and Model	No. of Cylinders Bore and Stroke	TRANSMISSION Make and Model	Location and Forward Speeds	Aux. Location and Speeds	REAR AXLE Make and Model	Gear and Type	Drive and Torque	GEAR RATIOS In High	In Low	FRAME Side Rail Dimensions	Type
1	Pierce- (T) 27T361T	.....	2450	150	170	27000	5825	B9.00/20	DB9.00/20	Her WXC2	6-4½x4½	Co RU4SL	U 4	Op	Tim 58200	SF	R	7.8	48.2	7⅝x4x⅜	C
2	Arr'w(conc'd) 28M611	6-7	5400	160	200	28000	11600	B10.50/24	DB10.50/24	Her GXA	6-4¾x5¾	Own618290	A 4	Op	Own 616743	WF	A	8	42	9½x2½x⅜	C
3	..... 28Y479	6-7	4400	160	200	28000	10675	B10.50/24	DB10.50/24	Her YXC3	6-4⅝x4¾	Co TNU	U 4	Op	Own 616743	WF	A	8	42	9½x2½x⅜	C
4	..... 28K611	6-7	5500	200	240	28000	11900	B10.50/24	DB10.50/24	Her GXA	6-4¾x5¾	Own618290	A 4	Op	Own 616743	WF	A	8	42	10x3x⅜	C
5	..... 34K611	7½–10	5300	170	200	34000	11675	B10.50/24	DS40x8	Her GXA	6-4¾x5¾	Own618290	A 4	Op	Own 616743	WF	A	8	42	10x3x⅜	C
6	..... (T) 34T361T	.....	2650	150	170	34000	7970	B9.00/20	DB9.00/20	Her WXC2	6-4½x4½	BL 325	U 5	Op	Tim 58200	SF	R	7.8	52	7¾x4x⅜	C
7	..... (T) 35R479T	.....	3800	150	170	35000	7970	B9.75/20	DB9.75/20	Her YXC3	6-4⅝x4¾	Co TNU	U 4	Op	Tim 75720	2F	R	9.11	50	8½x2½x⅜	C
8	..... (T) 45X479T	.....	4800	160	170	45000	9300	B10.50/20	DB10.50/20	Her YXC3	6-4⅝x4¾	Co TNU	U 4	Op	Tim 76720	2F	R	9.98	52.8	9½x2½x⅜	C
9	..... (T) 75M779T	.....	6400	190	190	75000	11750	B10.50/24	DB10.50/24	Her HXA	6-5¼ x6	Own618290	A 4	A	Own 616743	2F	A	9.9	51.9	9½x2½x⅜	C
10	..... (T) 60M611T	.....	6100	190	190	60000	10350	B10.50/24	DB10.50/24	Her GXA	6-4¾x5¾	Own618290	A 4	A	Own 616743	WF	A	9.9	51.9	9½x2½x⅜	C
11	Reo..... 1A, (1C†)	1½	575	136	160	9000	2930	B6.00/20	P32x6	Own	4–3⅛x4½	Own	U 4	No	Own	SF	H	5. 8	38.4	7x2¾x½	C
12	..... 1B, (1D†)	1½	695	140	164	10500	3100	B6.00/20	P32x6	Own	6-3¼x5	Own	U 4	No	Own	SF	H	5.28	34.8	7x2¾x⅜	C
13	..... 2B-2D	2	945	142	166	12500	3865	B6.50/20	DB6.50/20	Own	6-3¾x5	Own	U 4	No	Own	SF	H	5.83	38.4	7x3x¼	C
14	..... 2H(2J††)	2	1245	142	184	15000	4475	B7.00/20	DB7.00/20	Own	6-3¾x5	Own	U 4	No	Own	SF	H	6.5	42.9	7x¼x3	C
15	..... 3H(3J,3K††)	3	1795	153	205	17500	5125	B7.50/20	DB7.50/20	Own	6-3¾x5	Own	U 4	No	Own	SF	H	6.14	40.5	8⅛x¼x3	C
16	..... 4H,4J,4M	4	2595	170	205	20000	6280	B9.00/20	DB9.00/20	Own	8-3¾x5	Own	U 4	Op	Own	SF	H	6.14	40.5	10x3x¼	C
17	Schacht..... 10HA	2–3	1570	156	195	11500	4072	B7.00/20	DB7.00/20	Con 16C	6-3⅝x4⅝	BL 35	U 4	No	Tim	BF	H	5.83	31.2	6x3x¼	P
18	..... 20HA	2½–4	2185	160	207	15300	4783	B8.25/20	DB8.25/20	Her WXB	6-3¾x4½	Fu MLU	U 4	No	Tim	BF	H	6.06	38.5	6x3x¼	P
19	..... 25HA	3–4½	2695	146	213	19500	5770	B9.00/20	DB9.00/20	Her WXC	6-4x4½	Fu MGU	U 4	No	Tim	BF	H	6.02	39.2	7x3x¼	P
20	..... 28HA	4–5½	3050	146	227	23000	6600	B9.75/20	DB9.75/20	Her WXC	6-4x4½	Fu MGU	U 4	No	Tim	BF	H	6.83	43.8	7x3x¼	P
21	..... 30HA	4½–6	3295	146	227	23000	6800	B9.75/20	DB9.75/20	Her WXC	6-4x4½	Fu MGU	U 4	No	Wis	2F	R	7.14	46.4	7x3x¼	P
22	..... 35HA	5–7	3725	146	227	24000	7400	B9.75/20	DB9.75/20	Her WXC2	6-4½x4½	Fu MGU	U 4	No	Own	2F	R	8.00	52.0	8½x3x⅜	P
23	..... 40H	5–7	4295	154	235	25500	7600	B9.75/20	DB9.75/20	Her YXC	6-4¾x4¾	Fu VUOG	U 5	No	Own	2F	R	7.07	49.7	8½x3x⅜	P
24	..... 40HB	7–9	4695	154	235	29500	7750	B10.50/20	DB10.50/20	Her YXC	6-4¾x4¾	Fu VUOG	U 5	No	Wis	2F	R	7.07	49.7	8½x3x⅜	P
25	..... 66HA	8–11	5895	152	247	35000	9820	B10.50/24	DB10.50/24	Her RXC	6-4¾x5½	Fu VUOG	U 5	No	Wis	2F	R	7.07	49.8	8½x3x⅜	P
26	..... (T) TRDA	10	3895	148	174	39000	6450	B9.75/20	DB9.75/20	Her YXC3	6-4⅝x4¾	Fu VUOG	U 5	No	Own	2F	R	7.8	56.8	7x3x¼	P
27	Sterling..... FB40	1½–2	1135	142	162	10000	3450	B6.50/20	DB6.50/20	Con 25A	6-3¾x4	Wa T9	U 4	No	Own	BF	H	5.66	36.2	6x2⅝x⅜	C
28	..... FB50	2–2½	1240	142	162	11000	3650	B7.00/20	DB7.00/20	Con 25A	6-3¾x4	Wa T9	U 4	No	Own	BF	H	5.66	36.2	6x2⅝x⅜	C
29	..... FB60	2½–3	1490	142	162	12000	4150	B7.00/20	DB7.00/20	Wau TL	6-3½x4¾	Wa T9	U 4	No	Own	BF	H	5.83	37.3	6x2⅝x⅜	C
30	..... FB70	2½–3	2635	174	204	13000	5755	B7 50/20	B7.50/20	Wau ML	6-4x4¾	Own UC7	U 5	No	Own	BF	R	7.4	52.7	10x3¼x¼	L
31	..... FD80	3–4	3065	174	204	16000	6680	B8.25/20	DB8.25/20	Wau 6ML	6-4x4¾	Own UC7	U 5	Op	Own	2F	R	7.8	55.3	10x3¼x¼	L
32	..... FB80 Spec	3½–4	3010	174	204	16000	6680	B8.25/20	B8.25/20	Wau ML	6-4x4¾	Own UC7	U 5	No	Own	BF	R	7.8	55.6	10x3¼x¼	L
33	..... FC90	4	4105	174	204	18000	7480	B9.00/20	DB9.00/20	Wau 6MK	6-4½x4¾	Own UC7	U 5	Op	Own	CD	R	8.66	61.7	10x3¼x¼	L
34	• FD90	4	3315	174	204	18000	7480	B9.00/20	B9.00/20	Wau MK	6-4½x4¾	Own UC7	U 5	No	Own	2F	R	8.0	57.0	10x3¼x¼	L
35	..... FW97S, FD97S	4–5	4355	192	222	19500	8200	P36x8	DP36x8	Wau 68RL	6-4¾x5½	Own UC2	U 4	Op	Own	w/2F	R	7.75	51.6	12x3¼x¼	L
36	..... FC100	5–5½	4185	192	222	20000	7750	P36x8	DP36x8	Wau 6MK	6-4½x4¾	Own UC2	U 4	Op	Own	CD	R	9.3	61.2	12x3¼x¼	L
37	..... FC105	5½	4645	192	222	21000	8000	B9.00/20	DB9.00/20	Wau 6RS	6-4½x5½	Own UC	U 5	Op	Own	CD	R	8.66	61.7	12x3¼x¼	L
38	• FW115, FD115	5–6	4690	192	222	23000	8750	P40x8	DP40x8	Wau 68RL	6-4¾x5½	Own UC2	U 4	Op	Own	w/2F	R	8.20	54.6	12x3¼x¼	L
39	..... FC107	5–6	4700	192	222	21500	8200	P36x8	DP36x8	Wau 68RL	6-4¾x5½	Own UC2	U 4	Op	Own	CD	R	8.20	54.6	12x3¼x¼	L
40	..... FC120S	7½	4900	192	222	24000	8400	B9.75/20	DB9.75/20	Wau 68RL	6-4¾x5½	Own UC2	U 4	J 3	Own	CD	R	8.66	61.7	12x3¼x¼	L
41	• FW140, FD140	7–8	6005	192	222	28000	10050	P40x8	DP42x9	Wau 8RL	6-4¾x5½	Own UC2	U 4	Op	Own	w/2F	R	10.0	66.6	15x3¼x¼	L
42	• FC135	7–8	4800	192	222	27000	8900	P40x8	DP40x8	Wau 8RL	6-4¾x5½	Own UC2	U 4	Op	Own	CD	R	9.3	62.2	15x3¼x¼	L
43	• FC140	8–8½	5595	200	230	28000	9350	P40x8	DP40x8	Wau HB	6-4¼x5¾	Own UC2	U 4	Op	Own	CD	R	8.3	55.2	15x3¼x¼	L
44	• FC145	8–8½	6180	200	230	29000	10100	P40x8	DP40x8	Wau AB	6-4¼x5¾	Own UC8	U 4	Op	Own	CD	R	9.4	58.9	15x3¼x¼	L
45	• FW170, FD170	9½–10½	6980	200	230	34000	10550	P40x8	DP44x10	Wau AB	6-4½x5¾	Own UC8	U 4	Op	Own	w/2F	R	10.0	62.7	15x3¼x¼	L
46	• FC170	9½–10½	6900	200	230	34000	10550	P40x8	DP42x9	Wau RB	6-5x5¾	Own UC8	U 4	Op	Own	CD	R	9.4	58.9	15x3¼x¼	L
47	..... FD195	12–12½	8925	200	230	39000	10750	B10.50/20	DB10.50/20	Cum H Die	6-4½x6	BL 734	U 4	Op	Wis 1910W	2F	R	8.88	55.8	15x3¼x¼	L
48	Stewart..... 41X	¾	670	124	.....	.....	2875	B6.50/18	DB6.50/18	Lyc	6-3½x4½	WG	U 4	No	Cla	S½	H	5.4	35.1	6x2¼x½	T
49	..... 41XS	1	680	134	145	.....	2925	B6.50/20	B6.50/20	Lyc	6-3¼x4½	WG	U 4	No	Cla	S½	H	5.4	35.1	6x2¼x½	T
50	..... 44X	1½	695	134	176	8500	3250	B6.50/20	B6.50/20	Lyc	6-3¼x4½	WG	U 4	No	Cla	SF	H	5.61	35.8	7½x2¾x⅞	T
51	..... 42X	1¾	795	145	176	9000	3525	B6.50/.0	B6.50/20	Lyc	6-3¼x4½	WG	U 4	No	Cla	SF	H	5.6	35.8	7½x2¾x⅞	T
52	..... 43X	2	905	145	176	10800	4005	B6.50/20	DB6 50/20	Lyc	6-3⅝x4½	WG	U 4	No	Cla	SF	H	6.3	22.	7½x2¾x⅞	T
53	..... 45X	2	1295	145	190	12800	4350	B6.50/20	DB6.50/20	Lyc	6-3¾x4½	WG	U 4	No	Cla	SF	R	6.37	44.4	7½x2¾x⅞	T
54	..... 29XS	2½	1695	145	190	15000	5190	B7.00/20	DB7.00/20	Lyc	6-3¾x4½	BL	U 5	No	Cla	SF	R	6.37	44.4	7½x2¾x⅞	T
55	..... 32X	3	1990	165	220	18000	5460	B7.00/20	DB7.00/20	Lyc	6-3¾x4½	BL	U 5	No	Cla	SF	R	6.37	44.4	9x2¾x⅞	T
56	 58-8	3	2190	170	226	18000	6025	B7.50/20	DB7.50/20	Lyc	8-3⅝x4½	Ful	U 5	No	Cla	SF	R	7.1	47.0	9x2¾x⅞	T
57	..... 18X	3½	2690	165	220	20000	6600	B7.50/20	DB7.50/20	Lyc	6-3¾x5	Ful	U 5	No	Tim	WF	R	7.25	47.5	9x2¾x⅞	T
58	 48-8	3½	2990	170	241	20000	6750	B8.25/20	DB8.25/20	Lyc	8-3¾x4¾	BL	U 4	No	Cla	SF	R	7.1	50.1	9x2¾x⅞	T
59	..... 19X	3½	3690	165	235	20000	7110	B9.00/20	DB9.00/20	Lyc	6-3¾x5	Fu	U 4	A 3	Tim	WF	R	7.25	127.	9x2¾x⅞	T
60	 38-6	3½–5	3990	170	241	23000	7600	B9.00/20	DB9.00/20	Wau	6-4¾x5½	BL	U 4	A 3	Tim	2F	R	7.3	147.	9x2¾x⅞	T
61	 38-8	3½–5	3990	170	241	23000	7600	B9.00/20	DB9.00/20	Lyc	8-3¾x4¾	BL	U 4	A 3	Tim	2F	R	7.3	147.	9x2¾x⅞	T
62	..... 31X	5–6	5190	165	235	30000	9340	B9.75/20	DB9.75/20	Wau	6-4⅝x5½	BL	U 4	A 3	Tim	WF	R	8.2	15.1	9⅞x2¾x⅞	T
63	..... 27XS	7–8	6190	165	235	33000	10300	B10.50/24	DB10.50/24	Wau	6-4⅝x5½	BL	U 4	A 3	Tim	WF	R	10.1	93.8	9⅞x2¾x⅞	T
64	Studebaker.. (1)S-2	1½–2	670	130	165	9000	3110	B6.00/20	P32x6	Own	6-3¼x4⅜	War T9	U 4	No	Cla B373	SF	H	5.66	36.2	7x2¾x⅜	C
65	..... S-4	1¾–2½	785	130	165	10500	3445	B6.00/20	DB6.50/20	Own	6-3¼x4⅜	War T9	U 4	No	Cla B412	SF	H	6.8	43.5	7x2¾x⅞	T
66	..... S-6	2-3	945	141	165	12000	4095	B6.50/20	DB6.50/20	Own	6-3¼x4⅜	War T9	U 4	No	Tim 54200	SF	H	6.8	43.5	7x2¾x⅞	T
67	..... S-8	3-4	1350	141	183	16000	4875	B6.50/20	DP32x6	Own	6-3¼x4⅜	War T9	U 4	A 2	Tim 58200	SF	H	7.8	75.8	8x2¾x¼	T
68	Walter..... FN	2½–3	4500	120	144	15000	6500	B9.00/20	B9.00/20	Own 6MK	6-4½x4¾	Own FN	U 5	No	Own FN	2D	H	7.0	70.0	7x2¾x¼	P
69	..... FM	3½–4	5500	120	144	18000	7500	B9.00/20	DB9.00/20	Own 68RL	6-4½x5½	Own FM	U 5	No	Own FM	2D	H	6.00	60.0	12x2¾x¼	P
70	..... FKD	4–6	6300	118	136	24000	8500	B9.00/24	DB9.00/24	Own 6SRL	6-4½x5½	Own FK	U 5	No	Own FK	2D	H	8.50	85.0	11x3x¼	P
71	..... FCS	5–7	7200	136	160	27000	9500	B9 75/24	DB9.75/24	Own 68RK	6-4½x5½	Own FK	U 5	No	Own FH	2D	H	8.5	85.0	13x3x¼	P
72	..... FBS	5–7	7900	136	160	27000	9500	B9.75/24	DB9.75/24	Own 6RB	6-5x5¾	Fu	U 5	No	Own FH	2D	H	8.5	85.0	13x3x¼	P
73	..... FBRS	7–9	8300	136	160	32000	10500	B10.50/24	DB10.50/24	Own 6RB	6-5x5¾	Own FH	U 5	No	Own FHR	2D	H	8.5	85.0	13x3x¼	P
74	Ward La Fr... 25R14	2½	2800	176	208	14000	6000	B7.50/20	DB7.50/20	Wau ML	6-4¾x4¾	BL 324	U 4	No	Tim 54200H	SF	R	Opt	Opt	12x3x¼	B
75	..... 25R16	3	2975	176	208	16000	6200	B8.25/20	DB8.25/20	Wau ML	6-4x4¾	BL 324	U 4	No	Tim 56200H	SF	R	Opt	Opt	12x3x¼	B
76	..... 25R18	3-4	3275	176	208	18000	6400	B9.00/20	DB9.00/20	Wau MK	6-4½x4¾	BL 324	U 4	No	Tim 58200H	SF	R	Opt	Opt	12x3x¼	B
77	..... 30R19	3-4	3675	194	226	19000	7000	B9.00/20	DB9.00/20	Wau MK	6-4½x4¾	BL 524	U 4	No	Tim 65200H	WF	R	Opt	Opt	12x3½x⅜	B
78	..... 30R23	3½–5	4175	194	226	23000	7300	B9.75/20	DB9.75/20	Wau MK	6-4½x4¾	BL 524	U 4	No	Tim 65720H	WF	R	Opt	Opt	12x3½x⅜	B
79	..... 35R	4-5	4975	194	226	25000	8700	B9.75/20	DB9.75/20	Wau 8RL	6-4⅝x5½	BL 534	U 4	No	Tim 65720H	WF	R	Opt	Opt	12x3½x⅜	B
80	..... 55RH	5–7½	5350	203	224	30000	10000	B10.50/20	DB10.50/20	Wau SRK	6-4½x5½	BL 724	U 4	No	Tim 66720H	WF	R	Opt	Opt	14x3½x¼	T
81	..... 55RW	5–7½	5750	203	224	30000	10050	B10.50/20	DB10.50/20	Wau SRK	6-4½x5½	BL 724	U 4	No	Tim 66720W	WF	R	Opt	Opt	14x3½x¼	T
82	..... 75RH	5–7½	6350	210	231	30000	10500	B10.50/20	DB10.50/20	Wau RB	6-5x5¾	BL 734	U 4	No	Tim 66720H	WF	R	Opt	Opt	14x3½x¼	T
83	..... 75RW	5–7½	6750	210	231	30000	10600	B10.50/20	DB10.50/20	Wau RB	6-5x5¾	BL 734	U 4	No	Tim 66720W	WF	R	Opt	Opt	14x3½x¼	T
84	..... 50D	7½	5975	159	173	36000	11000	P40x8	DP40x8	Wau 8RL	6-4¾x5½	BL 724	U 4	No	Tim 68702D	WF	R	Opt	Opt	14x3½x¼	T
85	..... 100RW	7½–10	7350	210	231	36000	11500	B10.50/24	DB10.50/24	Wau RB	6-5x5¾	BL 734	U 4	No	Tim 68720W	WF	R	Opt	Opt	14x3½x¼	T
86	White (12)..... 60K	1¼–1½	1850	112	112	.....	3905	B7 00/20	B7 00/20	Own 2A	6-3½x4½	Own 3BC	U 3	No	Own 4C	S½	H	5.87	22.2	5x3x⅜	C
87	 601	1¼–1½	1850	138	157	.....	4210	B7.50/20	B7.50/20	Own 2A	6-3½x4½	Own 5B	U 4	No	Own 4C	S½	H	4.73	19.5	6x2¾x⅜	C
88	 61	1¼–1½	1700	138	157	.....	4420	B7.50/20	B7 50/20	Own GRCB	4-4x5¾	Own 8B	U 4	No	Own 4C	S½	H	4.73	19.5	6x2¾x⅜	C
89	 602	1½–2	2050	138	157	.....	4500	B7.00/20	DB7.00/20	Own 2A	6-3½x4½	Own 5B	U 4	No	Own 4CB	S½	H	4.73	19.5	6x2¾x⅜	C
90	 162	1½–2	1900	138	157	.....	4710	B7 00/20	DB7.00/20	Own GRCB	4-4x5¾	Own 8B	U 4	No	Own 4CB	S½	H	4.73	19.5	6x2¾x⅜	C
91	 611	2–2½	2450	148	196	.....	4960	B7.00/20	DB7.00/20	Own 4A	6-3¾x4½	Own 5B	U 4	No	Own 7C	S½	H	5.67	23.4	6¾x3⅛x⅛	C
92	 211	2–2½	2300	148	198	.....	5170	B7.00/20	DB7.00/20	Own GRCB	4-4x5¾	Own 8B	U 4	No	Own 7C	S½	H	5.67	23.4	6¾x3⅛x⅛	C
93	 612	2½–3	2800	148	196	.....	5295	B7.50/20	DB7.50/20	Own 4A	6-3¾x4½	Own 5B	U 4	No	Own 7CB	S½	H	5.67	23.4	6¾x3⅛x⅛	C
94	 212	2½–3	2650	148	198	.....	5500	B7.50/20	DB7.50/20	Own GRCB	4-4x5¾	Own 8B	U 4	No	Own 7CB	S½	H	5.67	23.4	6¾x3⅛x⅛	C
95	 620	2½–3	4350	157	195	.....	7430	B8.25/20	DB8.25/20	Own 3AD	6-4x5¼	Own 4B	U 4	No	Own 14C	SF	R	6.38	41.8	7⅛x2⅛x⅜	C
96	..... 51A	2½–4	3750	170	190	.....	6438	S36x5°	S36x8°	Own GRB	4-4¼x5¾	OwnGRBA	U 4	No	Own 51A	S½	R	7.14	35.6	8x3x¼	C
97	 618	3-4	3600	166	206	.....	6675	B9.00/20	DB9.00/20	Own 4AB	6-3¾x4	Own 11BA	U 5	No	Own 14CB	2F	R	8.15	61.8	8x3¾x¼	C
98	 621	3-4	4650	157	195	.....	7945	B9.00/20	DB9.00/20	Own 3AD	6-4x5¼	Own 4B	U 4	No	Own 10C	SF	R	6.33	41.4	7⅛x2⅛x⅜	C
99	 630	3-4½	5000	168	215	.....	8500	B9.00/20	DB9.00/20	Own 3AD	6-4x5¼	Own 4B	U 4	No	Own 10C	SF	R	6.33	41.4	8x3x¼	C
100	 640	3-4½	6100	180	214	.....	9200	B9.00/20	DB9.00/20	Own 1AB	6-4¾x5¾	Own 7B	U 4	No	Own 10C	SF	R	5.18	33.9	8¾x3⅛x⅛	C
101	 58	3-5	4400	180	195	.....	7797	S36x5°	DS36x5°	Own GRB	4-4¼x5¾	Own 4B	U 4	No	Own 2C	2F	R	7.6	49.7	8¾x3⅛x⅜	C
102	 58-88	7½	5300	196	196	.....	9300	B10.50/24	DB10.50/24	Own GRB	4-4¼x5¾	Own 4B	U 4	No	Or n 6C	2F	R	11.8	77.5	10⅛x3⅛x⅜	C
103	 55	5	4650	174	215	.....	8737	S36x5°	DS40x5	Own GRB	4-4¼x5¾	OwnGRBA	U 4	No	Own 55	2F	R	10.1	66.1	8x18.4 lb.	C
104	 631	3½–6	5750	168	215	.....	9000	B9.75/20	DB9.75/20	Own 3AD	6-4x5¼	Own 4B	U 4	No	Own 2C	2F	R	8.70	56.9	8x3x¼	I
105	 641	3½–6	6450	180	214	.....	9700	B9.75/20	DB9.75/20	Own 1AB	6-4¾x5¾	Own 7B	U 4	No	Own 2C	2F	R	7.16	46.9	8¼x3⅛x⅛	C
106	 642	4–7½	6750	180	214	.....	10600	B9.75/24	DB9.75/24	Own 1AB	6-4¾x5¾	Own 7B	U 4	No	Own 13C	2F	R	10.2	66.5	8¼x3⅛x⅛	C
107	 52	5–7½	5100	174	215	.....	9409	S36x6°	S40x12	Own GRB	4-4¼x5¾	OwnGRBA	U 4	No	Own 52	2F	R	11.7	58.4	8x18.4 lb.	C
108	 643	5–9	6950	180	214	.....	10900	B10.50/24	DB10.50/24	Own 1AB	6-4¾x5¾	Own 7B	U 4	No	Own 13C	2F	R	10.2	66.5	8¼x3⅛x⅛	C
109	 691	7-9	7250	129	129	.....	12200	B10.50/24	DB10.50/24	Own 5AD	6-4¾x5¾	Own 10BB	U 5	No	Own 13CB	2F	R	10.2	63.4	8¼x3⅜x⅜	C
110	Willys..... 77	.....	445	100	100	.....	.....	B5.00/17	B5.00/17	Own 77	4–3⅛x4½	Own 77	U 3	No	Own 77	S½	H	4.3	12.5	3¾x1⅛x⅜	T
	Six-Wheelers																					
111	Autocar...6GE	15	11000	198	234	.....	16300	B9.75/22	DB9.75/22	Ste LT	6–5¼x6	BL 734	U 4	A 3	Tim SW410	WF	R	8.2	99.6	10½x3x⅜	T
112	Chicago..1-56-D	4 10	6000	198	222	39000	12740	B9.75/20	DB9.75/20	Wau 6SRL	6-4¾x5¼	BL 60	A 7	No	Tim 300W	WF	R	7.75	73.6	8x3½x⅜	T
113	Corbitt..208W6	4R 3–5	5720	Op	Op	.....	9000	B7.50/20	DB7.50/20	Con 20R	6-4½x4¾	BL 615	U 5	No	Tim SW150W	w/2F	H	Opt	Opt	8x3½x¼	C
114	..... 288W6	4R 5–7½	6380	Op	Op	.....	10000	P34x7	DP34x7	Con 21R	6-4¾x4¾	BL 607	A 7	No	Tim SW250W	w/2F	H	Opt	Opt	8x3⅜	C
115	..... 368W6	4R 7½–10	8800	Op	Op	.....	11500	P36x8	DP36x8	Con 21R	6-4¾x4¾	BL 607	A 7	No	Tim SW310W	w/2F	R	Opt	Opt	10¼x3½x¼	T
116	..... 408W6	4R 10–15	11000	Op	Op	.....	13000	P38x9	DP38x9	Con 16H	6-4¾x5¾	BL 707	A 7	No	Tim SW410W	w/2F	R	Opt	Opt	10¼x3½x¼	T
117	Diamond T..801	4R 4	4140	189	219	21000	8500	P36x8	P36x8	Her YXC	6-4¾x4¾	BL 55	A 7	No	Own	WF	H	Opt	Opt	6½x3x¼	P
118	 1201	4R 6	5600	180	210	28000	11000	P34x7	DP34x7	Her RXB	6-4½x5¼	BL 60	A 7	No	Tim SW200	WF	R	Opt	Opt	9x3½x¼	P
119	 1602	4R 8	6400	175	210	36000	11700	P36x8	DP36x8	Her RXC	6-4¾x5¼	BL 60	A 7	No	Tim SW310	WF	R	Opt	Opt	9x3½x¼	P
120	 1603	4R 8	7500	184	224	36000	12500	P36x8	DP36x8	Wau 6RB	6-5x5¾	BL 70	A 7	No	Tim SW310	WF	R	Opt	Opt	9x3½x¼	P

Line Number	ENGINE DETAILS: Piston Displacement	Compression Ratio	Torque lb. ft.	N.A.C.C. Rated H.P.	Max. Brake H.P. at R.P.M. Given	Valve Arrangement	Camshaft Drive	Piston Material	MAIN BEARINGS: Number and Diameter	MAIN BEARINGS: Length	Oiling System Type	Governor Make	FUEL SYST.: Carburetors Make	FUEL SYST.: Fuel Feed	ELECTRICAL: Ignition System Make	ELECTRICAL: Generator, Starter Make	Clutch Type and Make	Radiator Make	Universals Make	FRONT AXLE: Make and Model	Steering Gear Make	BRAKES: SERVICE: Make, Location Type Operation	BRAKES: SERVICE: Lining Area	BRAKES: SERVICE: Drum Material	BRAKES: Hand Type, Location	BODY MOUNTING DATA: Cab to Rear of Frame	BODY MOUNTING DATA: Cab to Rear Axle	BODY MOUNTING DATA: Width of Frame	SPRINGS: Front	SPRINGS: Rear	SPRINGS: Auxiliary Type
1	361	4.7	229	40.3	77–2400	L	G	C	7–2⅝	13¼	PC	Ha	Zen	M	DR	DR	P.Lo	Lo	Cle	Tim 14706	Ha	B4IM	399	D	CD	93⅞	59⅜	34	38x2½	56x3	½
2	611	4.5	410	54.1	130–2000	L	G	A	7–3½	16⅝	PC	Ha	Str	M	DR	DR	P.Lo	Lo	Spi	Tim 26050	Ros	TO4IA	720	D	CD	127	72½	34	41x3	56x4	½
3	479	4.6	318	51.3	104–2200	L	G	A	7–3	14	PC	Ha	Zen	M	DR	DR	P.Lo	Lo	Cle	Tim 26050	Ha	TO4IA	720	D	CD	132¾	78¼	34	41x3	56x4	½
4	611	4.5	410	54.1	130–2000	L	G	A	7–3½	16⅝	PC	Ha	Str	M	DR	DR	P.Lo	Lo	Spi	Tim 26050	Ros	TO4IA	720	D	CD	167	112½	34	41x3	56x4	½
5	611	4.5	410	54.1	130–2000	L	G	A	7–3½	16⅝	PC	Ha	Str	M	DR	DR	P.Lo	Lo	Spi	Tim 27050	Ros	TO4IA	720	D	TX	137¾	82½	34	41x3	56x4	½
6	361	4.7	229	40.3	77–2400	L	G	C	7–2⅝	13¼	PC	Ha	Zen	M	DR	DR	P.Lo	Lo	Cle	Tim 14706	Ha	B4IM	399	D	CD	93⅞	59⅜	34	38x2½	56x3	½
7	479	4.6	318	51.3	104–2200	L	G	A	7–3	14	PC	Ha	Zen	M	DR	DR	P.Lo	Lo	Cle	Tim 15733	Ha	B4IA	473	D	CD	98¼	63¾	34	41x2½	56x3	½
8	479	4.6	318	51.3	104–2200	L	G	A	7–3	14	PC	Ha	Zen	M	DR	DR	P.Lo	Lo	Cle	Tim 26050	Ha	T4IA	618	D	TX	112⅝	78⅝	34	41x3	56x3½	½
9	779	4.5	482	66.1	150–1800	L	G	A	7–3½	16⅝	PC	Ha	Str	M	DR	DR	P.Lo	Lo	Spi	Tim 27050	Ros	TO4IA	720	D	TX	137	102½	34	41x3	56x4	½
10	611	4.5	410	54.1	130–2000	L	G	A	7–3½	16⅝	PC	Ha	Zen	M	DR	DR	P.Lo	Lo	Spi	Tim 27050	Ros	TO4IA	720	D	TX	137	102½	34	41x3	56x4	½
11	205	4.9	136	23.3	51–2500	L	G	B	5–3	8	FP	No	Zen	M	DR	DR	P.Lo	Pe	Cle	Own	Ros	L4IH	246	P	TX	102	60	34	40x2	50x2½	O
12	230	5	3	152	23.4	68–2800	L	C	A	7–2	12	CC	No	Zen	M	DR	DR	P.Lo	Ow	Cle	Own	Ros	L4IH	246	P	TX	102	60	34	40x2	50x2½	O
13	268	4.9	175	27.3	75–2800	L	C	A	7–2	12	CC	No	Zen	M	DR	DR	P.Lo	Ow	Cle	Own	Ros	L4IH	289	C	TX	105¼	60½	34	40x2¼	52x2½	½
14	268	4.9	175	27.3	75–2800	L	C	A	7–2	12	CC	No	Zen	M	DR	DR	P.BL	Mc	Cle	Own	Ros	L4IH	289	a	TX	116⅜	60½	34	40x2½	52x2½	½
15	309	4.9	200	31.5	85–2800	L	C	A	7–2⅜	12	CC	No	Zen	M	DR	DR	P.BL	Mc	Cle	Own	Ros	L4IH	344	a	FD	124½	68⅝	34	44x3	54x3	½
16	358	4.9	230	36.4	110–2800	L	G	A	9–2⅜	12½	FP	EV	Sch	M	DR	DR	dp.Lo	Mc	Cle	Own	Ros	L4IHV	390	a	FD	143	83	34	44x3	56x3½	½
17	248	5.1	150	27.3	65–2600	L	G	C	7–2⅝	10⅝	FP	No	Zen	M	DR	DR	D.BL	Yo	Spi	Tim	Ros	L4IH	380	G	TX	129½	Opt	31½	40x2½	50x3	½
18	298	4.7	192	33.7	66–2200	L	G	C	7–2⅝	13¼	PC	No	Zen	M	AL	AL	D.BB	Yo	Spi	Tim	Ros	L4IHV	452	G	TX	129½	Opt	31½	40x2½	50x3	½
19	339	4.7	225	38.4	73–2200	L	G	C	7–2⅝	13¼	PC	Mo	Zen	M	AL	AL	D.Fu	Yo	Spi	Tim	Ros	L4IHV	578	G	TX	106	Opt	31½	40x2½	50x3	½
20	339	4.7	225	38.4	73–2200	L	G	C	7–2⅝	13¼	PC	Mo	Zen	M	AL	AL	D.Fu	Yo	Spi	Tim	Ros	L4IHV	658	G	TX	106	Opt	31½	40x2½	50x3	½
21	339	4.7	225	38.4	73–2200	L	G	C	7–2⅝	13¼	PC	Mo	Zen	M	AL	AL	D.Fu	Yo	Spi	Tim	Ros	L4IHV	658	G	TX	106	Opt	31½	40x2½	50x3	½
22	360	4.7	238	40.3	80–2200	L	G	C	7–2⅝	13¼	PC	Mo	Zen	M	AL	AL	D.Fu	Yo	Spi	Shu	Ros	L4IHV	768	H	TD	106	Opt	31½	40x2½	50x3	½
23	428	4.4	280	45.9	93–2200	L	G	C	7–3	15	PC	Mo	Zen	M	AL	AL	D.Fu	Yo	Spi	Shu	Ros	L4IHV	768	H	TD	106	Opt	31½	40x2½	50x3	½
24	428	4.4	280	45.9	93–2200	L	G	C	7–3	15	PC	Mo	Zen	M	AL	AL	D.Fu	Yo	Spi	Shu	Ros	L4IHV	893	G	TD	106	Opt	31½	40x2½	50x3	½
25	529	4.9	355	51.2	115–2200	L	G	C	7–3	15	PC	Mo	Zen	M	AL	AL	D.Fu	Yo	Spi	Shu	Own	Ws4IA	847	G	TD	118	Opt	31½	42x3	60x3½	½
26	478	4.4	318	51.2	103–2200	L	G	C	7–3	15	PC	Mo	Zen	M	AL	AL	D.Fu	Yo	Spi	Tim	Ros	L4IHV	893	H	TD	92	Opt	31½	40x2¼	50x3	½
27	214	5.0	137	28.0	72–3300	L	C	A	4–2⅜	6¾	CC	No	Zen	M	DR	DR	P.Lo	Pe	Spi	Tim 30000H	Ros	L4IH	269	P	TX	96	57	34	38x2¼	50x2½	½
28	214	5.0	137	28.0	72–3300	L	C	A	4–2⅜	6¾	CC	No	Zen	M	DR	DR	P.Lo	Pe	Spi	Tim 30000H	Ros	L4IH	269	P	TX	96	57	34	38x2¼	50x2½	½
29	255	5.0	175	28.0	68–2600	L	G	C	4–2⅜	7⅜	CC	No	Zen	M	DR	DR	P.Lo	Pe	Spi	Tim 31000H	Ros	L4IH	282	P	TX	96	57	34	38x2¼	50x2½	½
30	358	4.4	230	38.4	80–2500	L	G	C	7–2⅝	12½	CC	Ha	Zen	M	DR	DR	D.Own	Mo	Spi	Tim 31000H	Ros	L4IHV	330	a	CX	144	91	34	42x2½	54x3	½
31	358	4.4	230	38.4	80–2500	L	G	C	7–2⅝	12½	CC	Ha	Zen	M	DR	DR	D.Own	Mo	Spi	Tim 33000H	Ha	L4IHV	396	a	CX	144	91	34	42x2½	54x3	½
32	358	4.4	230	38.4	80–2500	L	G	C	7–2⅝	12½	CC	Ha	Zen	M	DR	DR	D.Own	Mo	Spi	Tim 33000H	Ha	L4IHV	392	a	CX	144	91	34	42x2½	54x3	½
33	381	4.4	240	40.8	85–2500	L	G	C	7–2⅝	12½	CC	Ha	Zen	M	DR	DR	D.Own	Mo	Spi	Tim 33000H	Ha	O2IMV	466	s	JX	144	91	34	42x2½	54x3	½
34	381	4.4	240	40.8	85–2500	L	G	C	7–2⅝	12½	CC	Ha	Zen	M	DR	DR	D.Own	Mo	Spi	Tim 33000H	Ha	L4IHV	397	a	CX	144	91	34	42x2½	54x3	½
35	462	4.5	300	45.9	102–2400	L	G	C	7–3	13¼	CC	Ha	Zen	M	DR	DR	D.Own	Mo	Spi	Tim 35000H	Ros	L4IHV	664	a	CX	172	108	34	48x3	54x3	½
36	381	4.4	240	40.8	85–2500	L	G	C	7–2⅝	12½	CC	Ha	Zen	M	DR	DR	D.Own	Mo	Spi	Tim 35000H	Ros	O2IMV	528	a	JX	172	108	34	48x3	54x3	½
37	411	4.6	260	40.8	91–2400	L	G	A	7–3	13½	CC	Ha	Zen	M	DR	DR	D.Own	Mo	Spi	Tim 35000N	Ros	O2IMV	562	a	JX	172	108	34	48x3	54x3	½
38	462	4.5	300	45.9	102–2400	L	G	C	7–3	13¾	CC	Ha	Zen	M	DR	DR	D.Own	Mo	Spi	Tim 35000N	Ros	L4IHV	664	a	CX	172	108	34	48x3	54x3	½
39	462	4.5	300	45.9	102–2400	L	G	C	7–3	13¾	CC	Ha	Zen	M	DR	DR	D.Own	Mo	Spi	Tim 35000N	Ros	O2IMV	576	a	JX	172	108	34	48x3	54x3	½
40	462	4.5	300	45.9	102–2400	L	G	C	7–3	13¾	CC	Ha	Zen	M	DR	DR	D.Own	Mo	Spi	Tim 35000N	Ros	O2IMV	658	s	JX	172	108	34	48x3	54x3	½
41	462	4.5	300	45.9	102–2400	L	G	C	7–3	13¾	CC	Ha	Zen	M	DR	DR	D.Own	Mo	Spi	Tim 26450TN	Ros	Ws4IA	690	a	CX	172	108	34	48x3	60x4	½
42	462	4.5	300	45.9	102–2400	L	G	C	7–3	13¾	CC	Ha	Zen	M	DR	DR	D.Own	Mo	Spi	Tim 26450N	Ros	O2IMV	500	s	JX	172	108	34	48x3	54x3	½
43	489	4.5	295	43.4	90–2000	L	G	C	4–3½	11⅜	CC	Ha	Zen	M	DR	DR	D.Own	Mo	Spi	Tim 26450N	Ros	O2IMV	666	s	JX	168	107	34	48x3	54x3	½
44	549	4.5	330	48.6	99–2000	L	G	C	4–3½	11⅜	CC	Ha	Zen	M	DR	DR	D.Own	Mo	Spi	Tim 26450N	Ros	O2IMV	666	s	JX	168	107	34	48x3	54x3	½
45	549	4.5	330	48.6	99–2000	L	G	C	4–3½	11⅜	CC	Ha	Zen	M	DR	DR	D.Own	Mo	Spi	Tim 27050TW	Ros	Ws4IA	690	a	CX	163	107	34	48x3	60x4	½
46	677	4.4	440	60.0	125–2000	L	G	A	4–3½	11⅜	CC	Ha	Zen	M	DR	DR	D.Own	Mo	Spi	Tim 27450N	Ros	O2IMV	666	s	JX	168	107	34	48x3	54x3	½
47	672	17	420	57.0	125–1800	H	G	C	7–3¼	16½	CC	En	No	M	CI	LN	P.BL	Mo	Spi	Tim 27450TW	Ros	Ws4IA	718	a	CX	163	107	34	48x3	60x4	½
48	207	4.8	142	23.4	56–2600	L	G	C	4–2⅜	7	CC	No	Zen	P	DR	DR	P.BB	Fe	Spi	Spi	Ros	B4IM	180	a	4X	81	41¾	32½	38¼x2¼	50x2¼	½
49	207	4.8	142	23.4	56–2600	L	G	C	4–2⅜	8¼	CC	No	Zen	P	DR	DR	P.BB	Fe	Spi	Spi	Ros	B4IM	180	a	4X	92	51¾	32½	38¼x2¼	50x2½	N
50	224	4.8	142	25.3	62–2800	L	G	C	4–2⅜	8¼	CC	No	Zen	P	DR	DR	P.BB	Fe	Spi	Spi	Ros	B4IM	226	a	TX	92	51¾	32½	38¼x2¼	50x2½	N
51	224	4.8	142	25.3	62–2800	L	G	C	4–2⅜	8¼	CC	No	Zen	P	DR	DR	P.BB	Fe	Spi	Spi	Ros	B4IM	317	a	TX	92	51¾	32½	38x2½	50x2½	N
52	242	5.	162	27.3	65–2800	L	G	C	4–2⅜	8¼	CC	No	Zen	P	DR	DR	P.BB	Fe	Spi	Spi	Ros	B4IM	317	a	TX	103¼	62⅝	32½	38¼x2¼	50x2½	½
53	242	5.	162	27.3	65–2800	L	G	C	4–2⅜	8¼	CC	No	Zen	P	DR	DR	P.BB	Fe	Spi	Spi	Ros	B4IM	349	a	TX	104⅝	58⅜	32½	38¼x2¼	50x3	½
54	299	5.0	193	33.8	85–2750	L	G	C	4–2⅝	9	FP	Mo	Str	P	DR	DR	P.BL	Fe	Spi	Cla	Ros	B4IM	524	a	TX	104⅝	58¾	32½	38x2¼	50x3	¼
55	299	5.0	193	33.8	85–2750	L	G	C	4–2⅝	9	FP	Mo	Str	P	DR	DR	P.BL	Fe	Spi	Cla	Ros	B4IM	594	a	TX	127⅞	79	32¼	38x2¼	50x3	¼
56	354	4.6	224	36.2	90–2750	L	G	C	4–2¾	10	CC	Mo	Str	P	DR	DR	P.Fu	Fe	Spi	Tim	Ros	B4IM	594	a	TX	129¾	79	32¼	40x3	56x3	½
57	322	5.	225	36.5	90–2750	L	G	C	5–2⅜	11	FP	Mo	Str	P	DR	DR	P.Fu	Fe	Spi	Cla	Ros	B4IM	670	a	TF	126¾	79	32¼	40x3	50x3	½
58	420	5.2	300	44.4	130–2800	L	G	C	5–2⅝	12¾	FP	No	Str	P	DR	DR	P.BL	Fe	Spi	Cla	Ros	B4IMV	594	a	TX	128¼	75	32¼	40x3	56x3	½
59	354	4.6	224	36.2	90–2750	L	G	C	4–2¾	10	FP	Mo	Str	P	DR	DR	D.Fu	Fe	Spi	Eat	Ros	B4IM	670	a	TX	126¾	76¼	32¼	40x3	56x3	½
60	462	4.6	300	45.9	100–2000	L	G	C	7–3	12⅞	FP	Mo	Str	P	DR	DR	P.BL	Fe	Spi	Eat	Ros	B4IMV	670	a	TX	128¼	75½	32¼	40x3	56x3	½
61	420	5.2	300	44.4	130–2800	L	G	C	5–2⅜	12¾	FP	No	Str	P	DR	DR	P.BL	Fe	Spi	Eat	Ros	B4IMV	670	a	TX	128¼	75½	32¼	40x3	56x3	½
62	516	4.5	330	51.2	110–2000	L	G	C	7–3	12⅞	FP	Wa	Str	P	DR	DR	P.BL	Mo	Spi	Eat	Ros	B4IMV	708	a	TX	128¼	73	34	40x3	56x4	½
63	516	4.5	330	51.2	110–2000	L	G	C	7–3	12⅞	FP	Wa	Str	P	DR	DR	P.BL	Mo	Spi	Eat	Ros	W s4IA	902	a	TX	128¼	73	34	40x3	56x4	½
64	230	4.6	154	25.4	75–3200	L	G	C	4–2½	8	CC	No	Str	M	DR	DR	P.Lo	Mc	Spi	Cla F212	Ros	B4IM	231	a	4I	83¼	48⅛	33	36x1¾	45x2½	O
65	230	4.6	154	25.4	75–3200	L	G	C	4–2½	8	CC	Ha	Str	M	DR	DR	P.Lo	Mc	Spi	Cla F212	Ros	B4IMV	231	a	4I	83¼	48⅛	33	36x1¾	45x2½	½
66	230	4.6	154	25.4	75–3200	L	G	C	4–2½	8	CC	Ha	Str	M	DR	DR	DP.Lo	Mc	Cle	Tim 31010	Ros	B4IMV	284	D	4I	97¼	60	34	39x2	56x3	½
67	230	4.6	154	25.4	75–3200	L	G	C	4–2½	8	CC	Ha	Str	M	DR	DR	DP.Lo	Mc	MM	Tim 31020	Ros	B4IMV	420	a	4I	97	60	34	39x2½	56x3	½
68	381	4.5	240	40.0	85–2200	L	G	C	7–2⅝	12⅜	FP	Ow	Zen	P	DR	DR	P.Ow	Ow	Own	Own FN	Ros	O4FXM	450	D	FM	126	84	34	48x3	48x3	
69	462	4.5	300	46.0	100–1900	L	G	C	7–3	13⅞	FP	Ow	Zen	P	DR	DR	P.Ow	Ow	Own	Own FM	Ros	O4FXM	450	D	FM	126	84	34	48x4	48x4	
70	462	4.5	300	46.0	100–1900	L	G	C	7–3	13⅞	PC	Ow	Zen	V	Sc	DR	P.Ow	Ow	Own	Own F	Ros	O4FXM	600	D	FX	108	78	36	52x4	52x4	
71	517	4.5	330	51.0	110–1900	A	C	C	7–3	13⅞	PC	Ow	Zen	V	Sc	DR	P.Ow	Ow	Own	Own F	Ros	O4FXM	600	D	FX	126	96	36	52x4	52x4	
72	677	4.5	440	60.0	130–1900	L	G	C	7–3½	10⅜	PC	Ow	Zen	P	Sc	DR	P.Ow	Ow	Own	Own F	Ros	O4FXM	600	D	FX	126	96	36	52x4	52x4	
73	677	4.5	440	60.0	130–1900	L	G	C	7–3½	10⅜	PC	Ow	Zen	P	Sc	DR	P.Ow	Ow	Own	Own F	Ros	O4FXM	600	D	FX	126	96	36	52x4	52x5	
74	358	4.6	228	38.4	77–2200	L	G	C	7–2⅝	12½	FP	Ha	Zen	M	DR	DR	P.BL	Pe	Spi	Tim 33000H	Ros	L4IHV	260	a	TD	144	90⅜	33	40x2¼	52x3	
75	358	4.6	228	38.4	77–2200	L	G	C	7–2⅝	12½	FP	Ha	Zen	M	DR	DR	P.BL	Pe	Spi	Tim 33000H	Ros	L4IHV	330	a	TD	144	90⅜	33	40x2¼	52x3	
76	381	4.6	240	40.8	83–2200	L	G	C	7–2⅝	12½	FP	Ha	Zen	M	DR	DR	P.BL	Pe	Spi	Tim 33000H	Ros	L4IHV	375	a	TD	144	90⅜	33	40x2¼	52x3	
77	381	4.6	240	40.8	83–2200	L	G	C	7–2⅝	12½	FP	Ha	Zen	M	DR	DR	P.BL	Pe	Spi	Tim 35000H	Ros	L4IHV	375	a	TD	168	105	33	40x2½	52x3	
78	381	4.6	240	40.8	83–2200	L	G	C	7–2⅝	12½	FP	Ha	Zen	M	DR	DR	P.BL	Pe	Spi	Tim 35000H	Ros	L4IHV	460	a	TD	168	105	33	40x2½	52x3	
79	462	4.6	300	45.9	102–2200	L	G	C	7–3	13⅞	FP	Wa	Zen	M	DR	DR	P.BL	Pe	Spi	Tim 35000H	Ros	L4IHV	460	a	TD	168	105	33	40x2½	52x3	
80	517	4.6	330	51.3	110–2200	L	G	C	7–3	13⅞	FP	Wa	Zen	M	DR	DR	P.BL	Pe	Spi	Tim 35100H	Ros	L4IHV	650	a	TD	192	117½	33	40x3	56x3½	½
81	517	4.6	330	51.3	110–2200	L	G	C	7–3	13⅞	FP	Wa	Zen	M	DR	DR	P.BL	Pe	Spi	Tim27450TW	Ros	Ws4IA	590	a	TD	192	117½	33	40x3	56x3½	½
82	677	5.5	465	60.	145–2000	L	G	C	4–3½	11¼	FP	Wa	Zen	M	DR	DR	P.BL	Pe	Spi	Tim 27450H	Ros	L4IHV	650	a	TD	192	117½	33	42x3	56x3½	½
83	677	5.5	465	60.	145–2000	L	G	C	4–3½	11¼	FP	Wa	Zen	M	DR	DR	P.BL	Pe	Spi	Tim27450TW	Ros	Ws4IA	590	a	TD	192	117½	33	42x3	56x3½	½
84	462	4.6	300	45.9	102–2200	L	G	C	7–3	13⅞	FP	Wa	Zen	M	DR	DR	P.BL	Pe	Spi	Tim 16302	Ros	T2IMV	485	a	TD	124	88	37	44x3	56x3½	½
85	677	5.5	465	60.	145–2000	L	G	C	4–3½	11¼	FP	Wa	Zen	M	DR	DR	P.BL	Pe	Spi	Tim27450TW	Ros	Ws4IA	590	a	TD	192	117½	33	42x3	56x4	½
86	260	4.8	150	29.4	54–2100	L	C	S	7–2⅝	10⅛	FP	No	Zen	V	DR	LN	P.Ow	Ow	Spi	Own 4D	Ha	L4IH	276	a	TX			34½	39x2¼	50x2½	N
87	260	4.8	150	29.4	54–2100	L	C	S	7–2⅝	10⅛	FP	No	Zen	V	DR	DR	P.Ow	Ow	MM	Own 4D	Ha	L4IH	276	a	TX	112	58¼	34½	39x2¼	50x2½	N
88	289	4.3	170	25.6	45–1800	L	G	C	3–2¼	11⅜	FP	Ow	Zen	V	DR	DR	P.Ow	Ow	MM	Own 4D	Ha	L4IH	276	a	TX	112	58¼	34½	39x2¼	50x2½	N
89	260	4.8	150	29.4	54–2100	L	C	S	7–2⅝	10⅛	FP	No	Zen	V	DR	DR	P.Ow	Ow	MM	Own 4D	Ha	L4IH	276	a	TX	112	58¼	34½	39x2¼	50x2½	N
90	289	4.3	170	25.6	45–1800	L	G	C	3–2¼	11⅜	FP	Ow	Zen	V	DR	DR	P.Ow	Ow	MM	Own 4D	Ha	L4IH	276	a	TX	112	58¼	34½	39x2½	50x2½	N
91	299	4.8	190	33.7	70–2100	L	C	C	7–2⅝	10⅛	FP	Ha	Zen	V	DR	DR	P.Ow	Ow	Spi	Own 7D	Ha	L4IH	343	a	TX	115	68¼	34½	41x2½	54x3	N
92	289	4.3	170	25.6	45–1800	L	G	C	3–2¼	11⅜	FP	Ow	Zen	V	DR	DR	P.Ow	Ow	Spi	Own 7D	Ha	L4IH	343	a	TX	115	68¼	34½	41x2½	54x3	N
93	299	4.8	190	33.7	70–2100	L	C	C	7–2⅝	10⅛	FP	Ha	Zen	V	DR	DR	P.Ow	Ow	Spi	Own 7D	Ha	L4IH	343	a	CX	115	68¼	34½	41x2½	54x3	N
94	289	4.3	170	25.6	45–1800	L	G	C	3–2¼	11⅜	FP	Ow	Zen	V	DR	DR	P.Ow	Ow	Spi	Own 7D	Ha	L4IH	343	a	TX	115	68¼	34½	41x2½	54x3	N
95	396	4.9	250	38.4	100–2100	H	C	S	7–2¾	13⅛	FP	Ow	Zen	M	DR	DR	P.Ow	Ow	Spi	Own 11D	Ros	LO4IHV	414	a	CI	107	67½	34	41x2½	54x3	N
96	326	4.3	207	28.9	54–1600	L	G	C	3–2¼	11⅜	FP	Ow	Zen	V	Ei	ns	P.Ow	Ow	Spi	Own 51A	Ow	O2IM	335	a	CX	146	84¾	34	40½x2½	54⅝x3	N
97	299	5.5	202	33.7	77–2400	L	C	S	7–2⅝	10⅛	FP	Ha	Zen	V	DR	DR	P.Ow	Ow	Spi	Own 11DC	Ros	LO4IHV	414	a	2I	140	84	34	41x2½	54x3	N
98	396	4.9	250	38.4	100–2100	H	C	S	7–2¾	13⅛	FP	Ow	Zen	M	DR	DR	P.Ow	Ow	Spi	Own 11D	Ros	LO4IHV	484	a	CI	107½	67½	34	41x2½	54x3	N
99	396	4.9	250	38.4	100–2100	H	C	S	7–2¾	13⅛	FP	Ow	Zen	M	DR	DR	P.Ow	Ow	Spi	Own 6D	Ros	O4IHV	553	a	CI	144⅛	84½	34	42x3	56x3½	½
100	519	4.0	333	45.9	118–2100	H	C	S	7–3	15	FP	Ow	Zen	E	LN	LN	dp.Ow	Ow	Spi	Own 6D	Ros	O4IA	553	a	CI	156¾	91¾	34	42x3	56x3½	½
101	326	4.3	207	28.9	54–1600	L	G	C	3–2¼	11⅜	FP	Ow	Zen	V	Ei	ns	P.Ow	Ow	Spi	Own 2D	Own	OPXM	224	a	2I	148½	93½	34	40½x3	56x3½	½
102	326	4.3	207	28.9	54–1800	L	G	C	3–2¼	11⅜	FP	Ow	Zen	V	LN	LN	P.Ow	Ow	Spi	Own 9D	Ros	OPXM	224	a	2I	176	120	38½	42x3	57x5	½
103	326	4.3	207	28.9	54–1600	L	G	C	3–2¼	11⅜	FP	Ow	Zen	V	Ei	ns	P.Ow	Ow	Spi	Own 55	Own	OPXM	224	a	2I	167⅜	107½	38½	44x3	51½x5	½
104	396	4.9	250	38.4	100–2100	H	C	S	7–2¾	13⅛	FP	Ow	Zen	M	DR	DR	P.Ow	Ow	Spi	Own 9D	Ros	O4IA	595	a	CI	156¾	84½	34	42x3	56x3½	½
105	519	4.0	333	45.9	118–2100	H	C	S	7–3	15½	FP	Ow	Zen	E	LN	LN	dp.Ow	Ow	Spi	Own 9D	Ros	O4IA	595	a	CI	156¾	91¾	34	42x3	56x3½	½
106	519	4.0	333	45.9	118–2100	H	C	S	7–3	15½	FP	Ow	Zen	E	LN	LN	dp.Ow	Ow	Spi	Own 9D	Ros	O4IA	623	a	CI	156¾	91¾	34	42x3	51½x3	N
107	326	4.3	207	28.9	54–1800	L	G	C	3–2¼	11⅜	FP	Ow	Zen	V	Ei	ns	P.Ow	Ow	Spi	Own 52	Ow	OPXM	224	a	2I	167⅜	107½	42½	44x3	51½x5	N
108	519	4.0	333	45.9	118–2100	H	C	S	7–3	15½	FP	Ow	Zen	E	LN	LN	dp.Ow	Ow	Spi	Own 9D	Ros	O4IA	623	a	CI	156¾	91¾	34	42x3	51½x5	N
109	580	4.6	385	51.3	130–2300	H	C	S	7–3	15½	FP	Ow	Zen	M	DR	LN	P.Ow	Ow	Spi	Own 5D	Ros	O4IA	623	a	TD	100	65	36	44x3	55½x5	N
110	134	5.1	100	15.6	48–3200	L	C	C	3–2	5	CC	No	Tl	M	AL	AL	P.Ow	Fe	.....	Own 77	.....	B4IM	134	P	4I	.....	.....	.....	30x1¾	46x1¾	N
111	780	4.7	475	66.1	156–1800	L	G	A	7–3	16⅛	FP	St	Ze2	M	NE	LN	dp.BL	GO	Spi	Tim 27450	Ros	Ws6IA

Line Number	MAKE AND MODEL	Wheels Driven—6-Wheelers	GENERAL (See Keynote)						TIRE SIZE		MAJOR UNITS										FRAME	
											ENGINE		TRANSMISSION			REAR AXLE			GEAR RATIOS			
			Tonnage Rating	Chassis Price	Standard Wheelbase	Max. W. B. Furnished	Gross Vehicle Weight	Chassis Wt. (Stripped)	Front	Rear	Make and Model	No. of Cylinders Bore and Stroke	Make and Model	Location and Forward Speeds	Aux. Location and Speeds	Make and Model	Gear and Type	Drive and Torque	In High	In Low	Side Rail Dimensions	Type
1	Dodge Bros..UGS50		1½–3	875	153	153	12000	3575	B6.00/20	P32x6	Own	4-3⅝x4¾	Own	U 4	No	Own	SF	H	5.85	36.1	7⅞x2⅜x¼	C
2	.....GS50		1½–3	935	153	153	12000	3650	B6.00/20	P32x6	Own	6-3¼x4¼	Own	U 4	No	Own	SF	H	5.85	36.1	7⅞x2⅜x¼	C
3	.....GS55		2–4	1260	158	158	14575	4450	B7.00/20	DB7.00/20	Own	6-3¼x4⅝	Own	U 5	No	Own	SF	H	6.37	50.9	8⅛x2¼x¼	C
4	.....FS75		.....	3995	221	221	30000	8350	B9.00/20	DB9.00/20	Own	6-3⅝x5	Own	U 4	No	Own	SF	H	7.13	48.2	10x3¼x⅜	C
5	Fageol....8-46	4R	8	7200	195	220	38000	12200	B9.75/20	DB9.75/20	Wau SRK	6-4⅝x5½	BL 554	U 4	A 3	Tim Own	WF	R	5.19	127.	8x3½x⅜	C
6	10-46	4R	10	8700	232	232	54000	14100	B9.75/20	DB9.75/20	Wau RB	6-5x5¾	BL 714	U 4	A 3	Tim Own	WF	R	5.19	127.	8½x4x⅜	C
7	Federal D2SWL	2R	3	1050	140	182	13750	3925	B6.00/20	P32x6	Con W10	4-3½x4¼	WG T9	U 4	No	Cla B373A	SF	H	6.38	40.8	6x2¾x¼	C
8	.....E2SWL	2R	3	1150	145	187	13750	3975	B6.00/20	P32x6	Con 17E	6-3⅜x4	WG T9	U 4	No	Cla B373A	SF	H	6.38	40.8	6x2¾x¼	C
9	.....D2DL	4R	3	1350	140	182	14000	4235	B6.00/20	P32x6	Con W10	4-3½x4¼	WG T9	U 4	No	Cla B373A	BF	H	6.38	40.8	6x2¾x¼	C
10	.....E2DL	4R	3	1450	145	187	14000	4310	B6.00/20	P32x6	Con 17E	6-3⅜x4	WG T9	U 4	No	Cla B373A	BF	H	6.38	40.8	6x2¾x¼	C
11	.....A600SW	2R	4½–5	2395	170	206	20000	7300	B7.50/20	DB7.50/20	Con E602	6-4½x4½	Own 7784	A 4	No	Cla B642	BF	H	7.16	46.7	6x3½x¼	P
12	.....A600D	4R	4½–5	2795	170	206	20000	7700	B7.50/20	DB7.50/20	Con E602	6-4½x4½	Own 7784	A 4	No	Cla B642	BF	H	7.16	46.7	6x3½x¼	P
13	.....T10SW	2R	7	3895	188	224	28000	9600	P34x7	DP34x7	Con 18R	6-4x4½	Cla B710	A 5	No	Tim 58200H	BF	H	7.8	50.6	7½x3½x¼	P
14	FWD.....MX6	6	10–15	12255	200	Op	48000	17800	B13.50/20	DB13.50/20	Wau RB	6-5x5¾	BL 714	U 4	A 2	Wis 131TW	2F	H	8.36	173.	10x3x⅜	C
15	.....X6	4F	6–10	7385	170	Op	36000	12000	B9.75/20	DB9.75/20	Wau SRK	6-4⅝x5½	Own U	A 5	Op	Own X	BF	H	7.35	73	7x3x⅜	C
16	(6)Gen.Mo.T90	4R	5–7½	4690	185	220	28000	9570	B7.50/20	DB7.50/20	Own 400	6-4⅛x5	Own	U 5	Op	Own	WF	R	9.25	76.0	9⅞x3½x⅜	TL
17	.....T95	4R	9–11	7695	189	224	40000	13250	P34x7	DP34x7	Own 525	6-4½x5½	Own	U 4	Op	Own	WF	R	8.50	53.3	9⅞x4x⅜	L
18	.....T130	4R	12–15	9490	189	224	50000	14545	B9.75/20	DB9.75/20	Own 616	6-4⅛x5½	Own	U 4	A 3	Own	WF	R	9.50	119.	9⅞x4x⅜	L
19	Hug.....99	4R	10	1030	148	148	58500	15100	S36x8	S40x16	Bud GF6	6-4¾x6	BL 714-703	U 4	A 3	Wis SD410W	2F	R	10.3	139	9x4⅛x⅜	I
20	Ind..95SBT-151	2C	3	1675	168	186	20000	5500	P32x6	DP32x6	Her JXC	6-3¾x4¼	BL 224	U 4	No	Tim SBT151	SF	T	7.4	45.8	7⅞x2¾x⅜	C
21	....95SW 75	4R	3	1735	168	186	20000	5800	P32x6	DP32x6	Her JXC	6-3¾x4¼	BL 224	U 4	No	Tim SW75	WF	T	7.4	45.8	7⅞x2¾x⅜	C
22	....106SW151		3	2675	188	212	24000	7500	B8.25/20	DB8.25/20	Her WXC	6-4x4½	BL 324	U 4	No	Tim SW151	WF	T	6.4	42.6	8½x3x¼	TL
23	....17SBT251	2C	4	3250	188	224	28000	8550	P34x7	DP34x7	Her YXC	6-4⅝x4⅜	BL 334	U 4	Op	Tim SBT251	SF	T	6.1	37.8	8½x3x¼	TL
24	....17SW251	4R	4	3475	188	224	28000	9000	P34x7	DP34x7	Hei YXC	6-4⅝x4⅜	BL 334	U 4	Op	Tim SW251	WF	T	6.2	38.1	8½x3x¼	TL
25	Ken...186SDT	2C	10	6450	205	235	38000	10500	B9.00/20	DB9.00/20	Her YXC2	6-4½x4¾	BL 1554	U 4	A 3	Tim Sdt310w	2F	H	7.33	104	9x3x⅛	T
26	.....241SDT	2C	10	6850	205	235	40500	11000	B9.00/20	DB9.00/20	Her RXB	6-4½x5½	BL 714	U 4	A 3	Tim Sdt310w	2F	H	7.33	85.5	9x3x⅛	T
27	.....346A	4R	10	8800	210	240	40500	13000	B9.75/20	DB9.75/20	HaS 160	6-4¼x5½	BL 714	U 4	A 3	Tim SW310w	WF	H	7.25	84.5	8x3x¼	C
28	.....346B	4R	10	8550	210	240	40500	13000	B9.75/20	DB9.75/20	Bud GF-6	6-4¾x6	BL 714	U 4	A 3	Tim SW310w	WF	H	7.25	98.4	8x3x¼	C
29	.....346C	4R	10	9500	210	240	40500	14000	B9.75/20	DB9.75/20	HaS 175	6-5x6	BL 714	U 4	A 3	Tim SW310w	WF	H	7.25	98.4	8x3x¼	C
30	.....386C	4R	10	10200	210	240	50100	14500	B9.75/20	DB9.75/20	HaS 175	6-5x6	BL 714	U 4	A 3	Tim SW410w	WF	H	7.60	103.	8x3x¼	C
31	Kleiber.....280	4R	7½	6000	201	210	28000	10060	B9.00/20	DB9.00/20	Con 20R	6-4½x4⅜	BL 714-60	A 7	A 7	Tim Sw200tw	WF	R	7.75	73.6	7x3½x¼	P
32	340	4R	10	7000	210	215	34000	11900	B9.75/20	DB9.75/20	Con 21R	6-4⅝x3¾	BL 714-60	A 7	A 3	Tim Sw300W	WF	R	9.33	88.6	8x3½x¼	P
33	.....340T	4R	10	8000	215	225	34000	13650	B9.75/20	DB9.75/20	Con 22R	6-4½x5¼	BL 714-60	A 7	A 3	Tim Sw400W	WF	R	10.3	98.1	8x3½x¼	C
34	La Fran-R...Q6	4R	9–12	11605	216	260	40000	14900	B10.50/20	DB10.50/20	Own 312B	12–4x5	BL 714	U 4	No	Tim SWD410	WF		Opt	Opt	12x3½x¼	L
35	Maccar...SW86	2R	10–15	8250	216	250	38700	14450	B10.50/20	DB10.50/20	Wau 6SRK	6-4⅝x5½	BL 615	A 5	No	Tim SWT420	WF	R	7.6	62.5	12x3x⅜	T
36	.....TD500	4R	10–20	12500	224	268	50000	16250	B10.50/20	DB10.50/20	Ste TL	6-5¼x6	BL 748	A 8	No	Own	WF		7.6	64.5	12⅞x3⅛x⅜	T
37	Mack.....BX	4R	.....	8150	178	207	32000	12000	B8.25/22	DB8.25/22	Own BX	6-4¼x5½	Own BX	U 4	No	Own BX6	2F	A	6.53	46.0	9½x3x¼	C
38	.....BQ	4R	.....	9350	224	248	41900	15000	B9.75/22	DB9.75/22	Own BQ	6-4¾x5½	Own BQ	A 4	No	Own BX6	2F	R	6.54	41.9	10⅛x3⅞x¼	C
39	.....AC	4R	8–15	8500	217	257	51000	14550	P40x8	DP40x8	Own BQ	6-4¾x5¾	Own AC	J 4	No	Own AC	CD	R	9.26	59.4	8x3x⅜	C
40	.....AK	4R	8–15	9000	217	257	50500	15900	B9 75/22	DB9.75/22	Own BQ	6-4¾x5¾	Own AC	A 4	No	Own AK6	2F	A	7.46	47.8	8⅝x3x⅜	C
41	.....AP	4R	8–15	10500	217	257	51100	14850	P40x8	DP40x8	Own AP	6-5x6	Own AC	J 4	No	Own AP	CD	R	9.26	59.4	8x3x⅜	C
42	.....AP	4R	8–15	11000	217	257	50700	16400	B9.75/22	DB9.75/22	Own AP	6-5x6	Own AC	A 4	No	Own AK6	2F	A	7.46	47.8	8⅝x3x⅜	C
43	Mar-Herr...TH310A-6		7½–10	10000	193	229	37070	14070	B9.75/22	DB9.75/22	Her RXC	6-4⅝x5¼	Fu VUOG	U 5	A 2	Wis SD310W	2F	R	9.11	164.	8½x3x⅜	P
44	All6Wh.Dr.TH320-6		10–12	15000	225	255	45900	18900	B10.50/22	DB10.50/22	Her HXB	6-5x6	BL 724	U 4	A 3	Wis SD420A	2F	R	9.11	189.	10⅛x3x3½	P
45	.....TH330-6		12–15	17500	225	255	54100	20100	B11.25/20	DB11.25/20	Her HXD	6-5½x6	BL 734	U 4	A 3	Wis SD510	2F	R	10.2	189.	10⅛x3x3½	P
46	Mor'd....RA-15		4	1550	170	Op	15500	5300	B6.50/20	DB6.50/20	Her JXC	6-3¾x4¼	BL 224	U 4	No	Tim SBT75	SF	R	5.66	35.0	7⅞x2¾x¼	T
47	.....RA20	2C	5–5½	1985	184	Op	20000	6350	P32x6	DP32x6	Her JXC	6-3¾x4¼	BL 224	U 4	No	Tim SBT151	SF	R	6.16	38.2	9⅞x3½x⅜	T
48	SterlingFBT152	2R	8½	4580	174	204	30400	9500	B9.00/20	DB9.00/20	Wau 6-110	6-4x4¾	Own UC7	U 5	No	Own	BF	R	7.8	55.5	10x3¼x¼	L
49	.....FDT152	2R	8½	4705	174	204	30400	9700	B9.00/20	DB9.00/20	Wau 6-110	6-4x4¾	Own UC7	U 5	No	Own	2F	R	9.0	52.7	10x3¼x¼	L
50	.....FDS180	4R	8–10	8925	158	Op	36000	12850	P40x8	DP40x8	Wau AB	6-4½x5¾	Own UC8	U 4	A 3	Tim 310	2F	R	9.1	113.	15x3¼x¼	L
51	.....FDS200	4R	10–12	9510	159	Op	40000	13550	P40x8	DP40x8	Wau RB	6-5x5¾	Own UC8	U 4	A 3	Tim 410	2F	R	9.1	113.	15x3¼x¼	L
52	*.....FCS210	4R	15–18	10825	Op	Op	42000	14750	P40x8	DP40x8	Wau RB	6-5x5¾	Own UC8	U 4	A 3	Own	CD	R	9.5	59.6	15x3¼x¼	L
53	.....FDT200	2R	12–12½	7670	178	208	40000	12050	P40x8	DP40x8	Wau 6-125	6-4⅜x5⅛	Own UC	U 4	Op	Own	2F	R	8.85	58.8	12x3¼x¼	L
54	.....FDT250	2R	16–16½	8855	186	216	50000	13550	P42x9	DP42x9	Wau RB	6-5x5¾	Own UC8	U 4	Op	Own	2F	R	8.85	55.5	15x3¼x¼	L
55	.....FCT180	2R	10–10½	7265	178	208	36000	11200	P36x8	DP36x8	Wau SRL	6-4⅜x5⅛	Own UC	U 4	Op	Own	CD	R	8.2	54.5	12x3¼x¼	L
56	.....FCT200	2R	12–12½	7685	178	208	40000	11800	P40x8	DP40x8	Wau 6-125	6-4⅜x5⅛	Own UC	U 4	Op	Own	CD	R	9.3	61.8	12x3¼x¼	L
57	Wht.630SW200	4R	5–6	6245	193	205	.....	10000	B8.25/20	DB8.25/20	Own 3AD	6-4x5¼	Own 4B	U 4	No	Tim SW200H	WF	R	6.75	44.2	8½x3⅞x⅜	C
58	...642SW320	4R	7–9	8025	198	210	.....	12670	B9.00/20	DB9.00/20	Own 1AB	6-4⅜x5¾	Own 7B	U 4	No	TimSW310W	WF	R	8.5	55.6	8½x3⅞x⅜	C
59	...643SW420	4R	9–11	8550	198	215	.....	14400	P40x8	DP40x8	Own 1AB	6-4⅜x5¾	Own 7B	U 4	No	TimSW410W	WF	R	10.2	69.1	8½x3⅞x⅜	C

KEY TO ABBREVIATIONS AND REFERENCE MARKS

GENERAL

Chassis Price—Chassis price quoted applies to the standard wheelbase and specifications listed. All prices are F.O.B. factory.

***—List price not yet established. Ready next issue.

Tonnage Rating—Where a spread of ratings is given the maximum ratings are for ideal operating conditions and the minimum for extremely difficult conditions; the ranges between are for varying operating conditions.

Gross Vehicle Weight—Is chassis weight, plus body and cab, plus payload. Gross vehicle weight given for a model is based on maximum recommended tire size and not on tires listed as standard equipment.

Chassis Weight Stripped—Includes gas, oil and water and all things included in chassis price. Does not include the weight of cab.

Maximum Brake H. P. at Given R.P.M.—Is actual dynamometer reading without accessories.

Tractors—Unless given the designation N (meaning not available as tractor), all standard models may be assumed to be available as tract rs.

(N) Not available as tractor.

(T) This designation accompanying a model number indicates vehicle is specifically designed for tractor use only.

(3) Corbitt—Larger engines and corresponding auxiliary units provided on all models.

(5) Dodge—F-61 available as special tractor truck with 146-inch wheelbase with model designation of F-60, at $2645. G-81 available as special tractor truck with 146-inch wheelbase with model designation of G-80, at $5250. Model G-82 available as special tractor truck, with 146 in. wheelbase, with model designation of G-80 at $5250 and with 170 in. wheelbase with model designation of G-81 at $5285.

(6) General Motors—Models T-18 to T-61 inclusive are also available for export only as coach chassis. Double reduction axles optional in Models T-43 T-51, T-61, T-83 and T-95 at extra cost. Trailing type axles available on Model T-95 at price deduction. Optional size engines available on Models T-85, T-85H, T-95, T-110 and T-130 at varying cost.

Gramm—Larger engines and corresponding auxiliary units provided on all models at extra cost when type of service demands. Wheelbases and body mounting dimensions may change to suit special requirements. Double reduction axles available on all models except AX and BX.
Gross weight indicated for each model in the table is the straight rating.
Series CXH is supplied with Hercules JXB engine in Model CXHB and Hercules JXC in Model CXHC.

(8a) International Harvester—A-1, ¾ ton, same as A-2 except less spring leaves and smaller tires.

(8b) All Torque and Brake Horsepower values listed are based on engine outputs with all Standard Equipment Accessories running and are the same values obtaining with the truck on the road in actual operation.

(10) Sterling—Rocker arm used in place of springs

(*) Sterling—These models also availabe equipped with Cummins Model H Diesel engine.

†Reo—Models 1C and 1D are the longer wheelbase editions of Models 1A and 1B. The frame dimension of both is 7x2¾x⅛. They are furnished at extra cost.

††Reo—2J same as 2H except 166 in. wheelbase and price of $1695

††Reo—3J same as 3H except wheelbase of 170 in. and price of $2085; 3K same as 3H except 185 in. wheelbase and price of $2155.

(11) Studebaker—S-2 in 141 in. and 165 in. wheelbases has 6½ in. frame depth.
(12) White—Each model shown is furnished with different specifications for different tonnage ratings.

MAKES—ALL

AB—American Bosch.
AL—Auto Lite.

B—Bendix.
BB—Borg & Beck.
BE—Bendix front, Eaton rear.
BL—Brown-Lipe.
BO—Bendix front, Own rear.
Bf—Bethlehem.
Blo—Blood.
Bu or Bud—Buda.
BW—Borg Warner

C or Col—Columbia.
CB—Columbia front, Bendix rear.
Car—Carter.
Ch—Chicago.
CI—Ignition by compression.
Cl or Cla—Clark.
Cle—Cleveland.
Co—Covert (transmission).
Co—Continental (governor).
Con—Continental.
Cot—Cotta Gear.
Cum—Cummins-Diesel

Det—Detroit Lubricator.
DG—Detroit Gear and Machine.
DR—Delco Remy.

Eat—Eaton.
Ei—Eisemann
En—Governor built in engine
EV—Electro-Vac (gov.) Pierce.

Fe—Fedders.
Fu—Fuller.

Ge—Gemmer.
GO—G. & O.

Ha—Handy (governor).
Ha—Hannum (steering gear).
HaS—American Car & Fdry.
Her—Hercules.
Hr—Harrison
HS—Merchant & Evans (clutch).
HS—American Car & Fdry. (governor).

Jac—Saginaw.
Jo—Jones.

KP—Handy.

L—Lockheed.
LN—Leece Neville.
Lo—Long.
LO—Lockheed front, Own rear
Lyc—Lycoming.

Mc—McCord.
Ma—Marvel.
ME—Merchant & Evans.
MM—Mechanics Mach.
Mo—Modine (radiator).
Mo—Monarch (governor).
My—Mallory.

NE—North East.
No—Not supplied.
ns—No Standard.

O or Ow—Own.
Op or Opt—Optional.

Pe—Pierce (governor).
Pe—Perfex (radiator).
Pet—Peters.
PeS—Peters and Spicer.
PS—Peters & Snead.

RB—Robt. Bosch.
Ro—Rockford.
Ros—Ross.

S—Steeldraulic.
Sal—Salisbury.
Sc—Scintilla.
Sch—Wheeler-Schebler.
She—Sheldon.
Shu—Shuler.
SpB—Spicer and Blood
Spi—Spicer.
SpP—Spicer and Pick.
Ste—Detroit Lubro (carburetor).
Ste or St—Sterling.
Str—Stromberg.

Ti—Tillotson.
T or Tim—Timken
TO—Timken front, Own rear.

WG—Warner Gear.
Wa or War—Warner Corp. (steering gear)
Wa—Waukesha (governor).
Wau—Waukesha.
W or Wis—Wisconsin
Wo—Wohlrab.
Ws—Westinghouse.

Yo—Young.
Zen—Zenith.

Line Number	ENGINE DETAILS: Piston Displacement	Compression Ratio	Torque lb. ft.	N.A.C.C. Rated H.P.	Max. Brake H.P. at R.P.M. Given	Valve Arrangement	Camshaft Drive	Piston Material	MAIN BEARINGS: Number and Diameter	MAIN BEARINGS: Length	Oiling System Type	Governor Make	FUEL SYST.: Carburetors Make	FUEL SYST.: Fuel Feed	ELECTRICAL: Ignition System Make	ELECTRICAL: Generator, Starter Make	Clutch Type and Make	Radiator Make	Universals Make	FRONT AXLE: Make and Model	Steering Gear Make	BRAKES: SERVICE: Make, Location, Operation	SERVICE: Lining Area	SERVICE: Drum Material	BRAKES: Hand Type, Location	BODY MOUNTING DATA: Cab to Rear of Frame	Cab to Rear Axle	Width of Frame	SPRINGS: Front	SPRINGS: Rear	SPRINGS: Auxiliary Type
1	196	4.6	124	21.0	48–2800	L	G	A	3–2¼	6⅛	CC	No	Car	M	DR	DR	P.BB	Fe	Own	Own	Own	O61HV	273	a	TX	117½	55½	34¼	36x1¾	43⅜x3	N
2	211	5.3	134	25.3	60–3100	L	C	S	4–2¼	6¼	CC	No	Car	M	DR	DR	P.BB	Fe	Own	Own	Own	O61HV	273	a	TX	117½	50½	34½	36x1¾	43⅜x3	N
3	217	5.8	144	25.3	75–3200	L	C	S	4–2¼	6¼	CC	Ha	Car	M	DR	DR	P.BB	Fe	Own	Own	Own	O61HV	365	a	TX	145	50½	38⅛	39x2	43⅜x3	N
4	309	4.7	198	21.0	96–3000	L	G	S	7–2⅝	11¾	CC	Ha	Det	M	DR	DR	P.BB	Lo	Own	Own	Jac	O61HV	657	a	CD	218⅛	114⅜	34	42x3	56¼x4	N
5	517	4.5	340	51.3	108–2000	L	G	A	7–3	13⅞	PC	No	Zen	M	DR	DR	P.BL	Pe	Spi	Tim 35000N	Ros	Ws4RIA	630	H	FD	192	114⅝	33½	41x3	46x3½	N
6	677	4.4	460	60.	125–1800	L	G	A	4–3½	11½	PC	No	Zen	M	DR	DR	P.BL	Pe	Spi	Tim 17300	Ros	Ws4RIA	630	H	FD	214⅛	144⅛	34	42½x3	49½x4	N
7	200	4.7	126	24.0	48–2500	L	C	A	3–2⅛	5⅞	CC	Mo	Zen	M	DR	DR	P.BB	Lo	Cle	Cla F212	Ge	L6IH	312	P	TX	123	64¼	34	38x2¼	40½x2½	N
8	215	5.1	137	27.3	60–2600	L	C	A	7–2⅛	9¼	CC	Mo	Zen	M	DR	DR	P.BB	Lo	Cle	Cla F212	Ge	L6IH	312	P	TX	118	63¾	34	38x2¼	40½x2½	N
9	200	4.7	126	24.0	48–2500	L	C	A	3–2⅛	5⅞	CC	Mo	Zen	M	DR	DR	P.BB	Lo	Cle	Cla F212	Ge	L6IH	312	P	TX	123	64¼	34	38x2¼	40½x2½	N
10	215	5.1	137	27.3	60–2600	L	C	A	7–2⅛	9¼	CC	Mo	Zen	M	DR	DR	P.BB	Lo	Cle	Cla F212	Ge	L6IH	312	P	TX	118	63¾	34	38x2¼	40½x2½	N
11	360	4.6	240	40.8	90–2500	L	G	C	7–2⅝	12⅛	CC	KP	Zen	M	DR	DR	P.BB	Lo	PS	Cla F318	Ros	L6IHV	495	a	TI	155	84	34	40x2½	44x3	N
12	360	4.6	240	40.8	90–2500	L	G	C	7–2⅝	12⅛	CC	KP	Zen	M	DR	DR	P.BB	Lo	PS	Cla F318	Ros	L6IHV	495	a	TI	155	84	34	40x2½	44x3	N
13	339	4.2	212	38.4	80–2200	H	C	C	7–2¾	13⅛	CC	KP	Zen	M	DR	DR	P.BB	Lo	Spi	Own 7738	Ros	L6IHV	623	a	TD	182	102	34	42x2½	50x3½	N
14	677	4.4	460	60.0	125–2000	L	G	C	4–3½	11⅝	PC	Wa	Zen	M	NE	NE	D.BL	Pe	Blo	Wis 131F	Ros	B6IMV	504	G	T4	220	145	34	48x3½	40x5	N
15	517	4.5	330	51.3	110–2400	L	G	C	7–3	13⅞	PC	Wa	Zen	M	NE	NE	D.BL	Pe	Blo	Own M	Ros	B6IA	864	G	4M	180	137	36	42¾x2½	44x3	N
16	400	4.6	296	40.9	110–2300	H	G	A	4–2.7	8⅜	FP	Ha	Str	M	DR	DR	dp.Ow	Lo	Cle	Own	Jac	B4rIA	557	a	TX	161	100¼	34½	40x3	50x4	½
17	525	4.5	380	48.6	128–2100	H	C	A	7–2¾	14	FP	Ha	Str	M	DR	DR	dp.Ow	Lo	Spi	Own	Jac	B6IA	817	a	TX	161	100	34⅛	50x3½	45x4	½
18	616	4.5	450	57.0	149–3100	H	C	A	7–2¾	14½	FP	Ha	Str	M	DR	DR	dp.Ow	Lo	Spi	Own	Jac	B6IA	965	a	TX	161	100	34⅛	50x3½	45x4	½
19	638	4.3	410	54.1	126–1850	L	G	C	4–3	10¼	PC	Pe	Zen	M	RB	No	dp.BL	Yo	Blo	Shu 715-11	Ros	WrIA	792	G	TD	139	88⅛	38⅜	41⅞x3	53x4	N
20	282	5.3	186	33.7	73–2800	L	G	A	7–2½	10⅛	PC	No	Str	M	AL	AL	P.BL	Yo	Spi	Tim 31020	Ros	L6IHV	559	G	TX	140	83	34	37x2¼	52x4	N
21	282	5.3	186	33.7	73–2800	L	G	A	7–2½	10⅛	PC	No	Str	M	AL	AL	P.BL	Yo	Spi	Tim 31020	Ros	L6IHV	459	G	TX	140	83	34	37x2¼	44x3	N
22	339	4.7	210	38.4	75–2400	L	G	A	7–2⅝	13¾	FP	Opt	Str	M	AL	AL	P.BL	Yo	Spi	Shu 5572	Ros	L6IHV	559	G	CD	168	101⅜	34½	40x2½	52x4	N
23	428	4.4	283	45.9	94–2200	L	G	A	7–3	14	PC	Ha	Str	M	AL	AL	P.BL	Yo	Spi	Shu 5582B	Ros	L6IHV	625	G	CD	168	101	34½	40x2½	52x4	N
24	428	4.4	283	45.9	94–2200	L	G	A	7–3	14	PC	Ha	Str	M	AL	AL	P.BL	Yo	Spi	Shu 5582B	Ros	L6:HV	625	G	CD	168	101	34½	40x2½	52x4	N
25	453	4.7	300	48.6	98–2200	L	G	A	7–3	14	CC	Ha	Zen	M	DR	DR	P.BL	Pe	Spi	Tim 35000N	Ros	Ws4rA	815	a	FD	192	120	33¾	42x3	56x4	½
26	501	4.9	330	48.6	110–2200	L	G	A	7–3	12½	CC	Ha	Zen	M	DR	DR	P.BL	Pe	Spi	Tim 36020N	Ros	Ws4rA	815	a	FD	192	120	33¾	42x3	56x4	½
27	488	4.4	322	43.3	125–2400	H	C	A	4–2¾	10⅜	FP	No	Zen	M	DR	DR	P.BL	Pe	Spi	Tim 36020N	Ros	Ws4rA	815	a	FD	192	120	33¾	42x3	56x4	½
28	638	4.3	410	54.1	126–1850	L	G	C	4–3	10⅞	CC	Bu	Zen	M	DR	DR	P.BL	Pe	Spi	Tim 36020N	Ros	Ws4rA	815	a	FD	192	120	33¾	42x3	56x4	½
29	707	4.4	506	60.0	170–2000	H	C	A	7–3¼	11⅞	FP	HS	Zen	M	DR	DR	P.BL	Pe	Spi	Tim 36020N	Ros	Ws4rA	815	a	FD	192	120	33¾	42x3	56x4	½
30	707	4.4	506	60.0	170–2000	H	C	A	7–3¼	11⅞	FP	HS	Zen	M	DR	DR	P.BL	Pe	Spi	Tim 36020N	Ros	Ws4rA	815	a	FD	192	120	33¾	42x3	56x4	½
31	411	4.2	236	40.0	89– 400	H	C	C	7–2¾	13	FP	No	Str	V	RB	DR	D.BL	Ow	Spi	Tim 16302	Ros	T4IA	848	G	TD	180	120	38	44x3	60x4	½
32	427	4.2	267	45.9	100–2600	H	C	C	7–2¾	13	FP	No	Str	V	RB	DR	D.BL	Ow	Spi	Tim 16302	Ros	T4IA	848	G	TD	180	130	38	44x3	60x4	½
33	638	4.2	340	54.0	120–2400	H	C	C	7–2¾	13⅛	FP	No	Str	V	RB	DR	D.BL	Ow	Spi	Tim 17300	Ros	T4IA	848	G	TD	204	130	38	44x3	60x4	½
34	754	5.1	510	76.7	240–2900	H	C	C	4–3½	10	PC	No	Zen	M	DR	DR	dp. Lo	Ow	Blo	Tim 27450tw	Ros	Ws61A	782	Da	CD	1111⅛	216	34	44x3	None	N
35	517	4.5	332	51.3	107–2000	L	G	A	7–3	13⅞	FP	Wa	Str	M	DR	DR	P.BL	Ch	Spi	Tim 26450tw	Ros	Ws61A	1030	a	TD	192	124⅛	33⅛	42x3	48x4	N
36	780	4.7	475	66.1	156–1800	L	G	A	7–3	16⅛	FP	St	Ze 2	M	NE	LN	dp. BL	GO	Spi	Tim 27451tw	Ros	Ws61A	1030	a	TD	264	170	36	42x3	None	N
37	468	4.7	292	43.4	104–2300	L	G	C	7–3	13⅞	FP	Ha	Str	M	NE	NE	P.Own	Ow	Spi	Own BX	Ros	O6IA	1118	a	FD	192	109	33¼	54¼x3	48x3½	N
38	611	5.0	398	54.2	128–2200	L	G	C	4–3½	11⅛	PS	Ow	Str	M	RB	NE	P.Ow	Ow	Cle	Own BQ	Ros	O6IA	902	a	FD	192	111	33¼	50x3½	48x3½	½
39	611	5.0	398	54.2	128–2200	L	G	C	4–3½	11⅛	PS	Ow	Str	M	RB	LN	P.Ow	Ow	Cle	Own AC	Ros	O6IA	1052	a	FD	180	109	37⅝	48x3½	52x4	½
40	611	5.0	398	54.2	128–2200	L	G	C	4–3½	11⅛	PS	Ow	Str	M	RB	LN	P.Ow	Ow	Cle	Own AK	Ros	O6IA	1044	a	FD	180	109	37	48x3½	52x4	½
41	706	4.8	427	60.0	138–1900	L	G	S	4–3⅛	11⅛	PS	Ow	Str	G	RB	LN	P.Ow	Ow	Spi	Own AK	Ros	O6IA	1052	a	FD	180	109	37	48x3½	52x4	½
42	706	4.8	427	60.0	138–1900	L	G	S	4–3⅛	11⅛	PS	Ow	Str	G	RB	LN	P.Ow	Ow	Cle	Own AK	Ros	O6IA	1044	a	FD	180	109	37	46⅛x3½	52x4	½
43	529	4.9	350	51.3	115–2200	L	G	A	7–3	14	PC	Ha	Zen	M	DR	DR	D Fu	Yo	Blo	Own 3	Ros	Ws2/4IA	1836	a	FD	Opt	98	34	44x3	46x4	N
44	707	4.5	455	60.	150–2000	L	C	A	7–3½	17	PC	Ha	Zen	M	DR	DR	dp.BL	Yo	Blo	Own 3A	Ros	Ws2/4IA	1948	a	FD	Opt	128	34	52x4	46x4	N
45	855	4.5	550	72.	180–2000	L	G	A	7–3½	17	PC	Ha	Zen	M	DR	DR	dp BL	Yo	Blo	Own 4	Ros	Ws2/4IA	1948	a	FD	Opt	128	34	52x4	46x4	N
46	282	5.0	176	33.8	73–2800	L	G	C	7–2½	10⅛	PC	No	Zen	M	AL	AL	P.BL	Lo	Spi	Tim 30000H	Ros	L6IH	412	a	TD	156	90	34	40x2½	44x3	N
47	282	5.0	176	33.8	73–2800	L	G	C	7–2½	10⅛	PC	No	Zen	M	AL	AL	P.BL	Lo	Spi	Tim 31000H	Ros	L6IH	570	a	TD	168	102	34	40x2½	52x4	N
48	358	5.0	254	38.5	110–2800	F	G	A	7–2⅛	12¼	CC	Ha	Zen	M	DR	DR	D.Ow	Mo	Spi	Tim 35000N	Ros	L41HV	596	a	CX	192	91	34	42x2½	57x4	N
49	358	5.0	254	38.5	110–2800	F	G	A	7–2⅛	12¼	CC	Ha	Zen	M	DR	DR	D.Ow	Mo	Spi	Tim 35000N	Ros	L41HV	596	a	CX	192	91	34	42x2½	57x4	N
50	549	4.5	330	48.6	99–2000	L	G	C	4–3½	11⅜	CC	Ha	Zen	M	DR	DR	D.Ow	Mo	Spi	Tim 26450N	Ros	Ws4IA	576	a	CX	Opt	88	34	48x3	58x4	N
51	677	4.4	440	60.0	125–2000	L	G	C	4–3½	11⅜	CC	Ha	Zen	M	DR	DR	D.Ow	Mo	Spi	Tim 27450N	Ros	Ws4IA	792	a	CX	Opt	89	34	48x3	58x4	N
52	677	4.4	440	60.0	125–2000	L	G	A	4–3½	11⅜	CC	Ha	Zen	M	DR	DR	D.Ow	Mo	Spi	Tim 27450N	Ros	Ws4IA	792	s	CD	Opt	Opt	34	48x3	60x3½	N
53	462	5.5	324	45.9	125–2400	F	G	A	7–3	13⅞	CC	Ha	Zen	M	DR	DR	D.Ow	No	Spi	Tim 26450N	Ros	O4IA	792	a	CX	192	94	34	48x3	(10)	N
54	677	4.4	440	60.0	125–2000	L	G	A	4–3½	11⅜	CC	Ha	Zen	M	DR	DR	D.Ow	Mo	Spi	Tim 27450N	Ros	O4IA	792	a	CX	192	93	34	48x3	(10)	N
55	462	5.5	324	45.9	102–2400	L	G	C	7–3	13⅞	CC	Ha	Zen	M	DR	DR	D.Ow	Mo	Spi	Tim 26450N	Ros	O4IA	1152	S	JX	192	94	34	48x3	(10)	N
56	462	5.5	324	45.9	125–2400	F	G	A	7–3	13⅞	CC	Ha	Zen	M	DR	DR	D.Ow	Mo	Spi	Tim 26450N	Ros	O4IA	1152	S	JX	192	94	34	48x3	(10)	N
57	396	4.9	250	38.4	100–2100	H	C	S	7–2¾	13⅛	FP	Ow	Zen	E	DR	DR	P.Ow	Ow	Spi	Own 6D	Ros	Lr41HV	514	a	CI	194⅞	109⅞	34⅛	42x3	51½x4	N
58	519	4.0	333	45.9	118–2100	H	C	S	7–3	15⅛	FP	Ow	Zen	E	LN	LN	dp.Ow	Ow	Spi	Own 12D	Ros	Ws61A	833	a	CI	194¾	109¾	34¼	42x3	42x4	N
59	519	4.0	333	45.9	118–2100	H	C	S	7–3	15⅛	FP	Ow	Zen	E	LN	LN	dp.Ow	Ow	Spi	Own 12D	Ros	Ws61A	833	a	CI	194¾	109¾	34¼	42x3	42x4	N

KEY TO ABBREVIATIONS AND REFERENCE MARKS

BRAKES—SERVICE

Location

2—Two Wheels, rear only.
2/4—Two-wheel brakes effective on all four wheels through driveshaft.
T/4—Brake on transmission effective on all four wheels through driveshaft.
4—Four Wheels, front and rear.
4r—Four Wheels, rear only.
6—Six Wheels, front and rear.
J—Jackshaft.
P—Propeller shaft.

Type

I—Internal.
X—External.

Operation

A—Air.
D—Hydraulic and mechanical.
H—Hydraulic.
M—Mechanical.
V—Vacuum.

BRAKES—HAND

Location

C—Center of double propeller shaft.
2—Rear wheels.
4—Four wheels.
R—Worm or bevel gearshaft.
T—Transmission.
F—Driveshaft.

Type

D—Tru-Stop disk.
I—Internal.
X—External.

BRAKE DRUMS

Material

a—Cast alloy iron.
A—American Car Fdry.
C—Centrifuse
D—Dayton.
E—Ermalite.
G—Gunite.
H—Hunt Spiller.
c—Cast iron.
p—Pressed steel.
P—Pressed steel.
s—Cast steel.
(Where a combination of any of the above is used, the first reference mark applies to the front and the second to the rear drums.)

CLUTCH

Type

D—Multiple disk.
dp—Double plate.
O—Plate in oil.
P—Single plate

ENGINE

Valve Arrangement

F—Inlet valve in head; exhaust valve at side.
H—In head.
L—"L" head.

Camshaft Drive

C—Chain.
G—Gear.

Piston Material

A—Aluminum alloy.
B—Semi-steel.
C—Cast iron.
N—Nickel iron.
S—Aluminum alloy with strut.

Main Bearings

r—Rear main bearing.
B—Ball bearing.

Oiling System

CC—Pressure to main, connecting rod and camshaft bearings.
FP—Pressure to main, connecting rod, camshaft bearings and piston pins.
PC—Pressure to mains and connecting rod bearings.
PG—Pump, gravity and splash.
PS—Pressure with splash.
SP—Circulating with splash.

FRAME

Type

I—"I" Beam.
C—Channel.
T—Channel tapered front and rear.
L—Channel reinforced with liner.
B—Channel reinforced with both liner and fishplate.
P—Channel reinforced with plate.
TL—Channel tapered front and rear reinforced with liner.
D—Drop Center
Tf—Tapered front
X—x-Braced

FUEL SYSTEM

Fuel Feed

E—Electric pump.
G—Gravity.
M—Mechanical pump.
P—Pressure.
V—Vacuum.

REAR AXLE

Final Drive and Type

B—Bevel.
C—Chain.
D—Dead.
F—Full-floating.
H—Hypoid.
I—Internal Gear.
2—Double Reduction.
R—Relay—Pendulum Drive.
S—Spiral bevel.
W—Worm.
w/2—Worm or Double Reduction Optional.
½—Semi-floating.
¾—Three-quarter floating.

Drive and Torque

A—Radius Rods and Torque Arm.
H—Hotchkiss. (springs)
R—Radius Rods
T—Torque Arm.
U—Torque Tube.

SPRINGS

Auxiliary Type

½—Semi-elliptic above or below main springs.
¼—Quarter elliptic.
C—Coil spring.
N—No.
O—Optional.

TIRES

B—Balloon.
DB—Dual Balloons.
P—High Pressure Pneumatics.
DP—Dual High Pressure Pneumatics
S—Solids.
DS—Dual Solids.
°—Pneumatics at extra cost.

TRANSMISSION

Location

A—Amidships.
J—Unit with jackshaft.
U—Unit with engine.

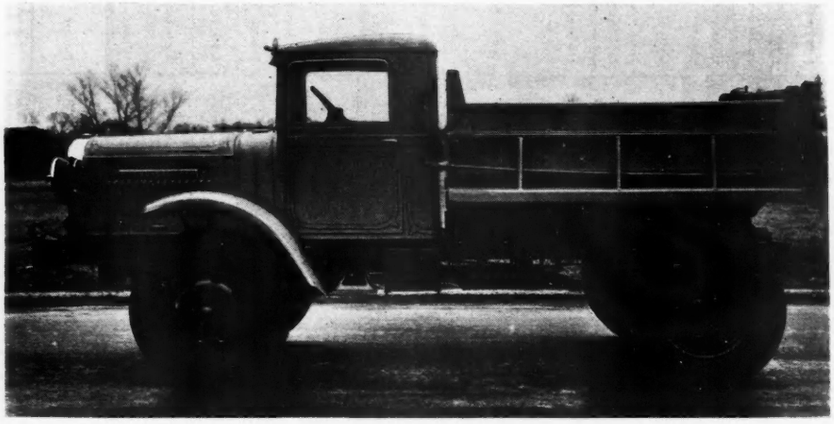
Auxiliary Location

No—Not furnished.
Op—Optional at extra cost.
A—Amidships.
R—Rear of amidships main transmission.
U—Unit with engine.

WHEELS DRIVEN

2C—Center pair of rear wheels
2R—Rear pair of rear wheels.
4F—Front and center pair of rear wheels
4R—Four rear wheels.
6—Six wheels

Propeller Shafts for Heavy-Duty Equipment



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